

The Archaeology and Reconstruction of Zuart'noc'

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*[T'oros] T'oramanyan reconstructed
the ruins with the measured fragments
of the investigator and the warm
breath of the aesthete.*

Tiran Marut'yan, 1963¹

*All [specialists of Zuart'noc'] have
allowed themselves to be mesmerized
by T'oramanyan's impossible
reconstructions.*

W. Eugene Kleinbauer, 1978²

Of any church in medieval Armenia, none is more famous than Zuart'noc'. Inspiring an eleventh-century church at Ani and the 1961 Erevan airport terminal, miniaturized in wooden shrines and relief panels for sale at the Vernissage market, and used as a graphic logo for choirs and youth organizations, the monument has become a totem of Armenian identity. It has also received more scholarly attention than any other building of the seventh-century Caucasus. The

1 T. Marut'yan, *Zvart'noc' ev zvart'noc'atip tačarner* (Erevan, 1963), 31.

2 W. E. Kleinbauer, "Tradition and Innovation in the Design of Zvartnotz," in *The Second International Symposium on Armenian Art: Collection of Reports*, vol. 3 (Erevan, 1981), 13–24, at 19.

subject of four monographs to date, Zuart'noc' also became, in 1972, the first early medieval Armenian monument to be featured in the American art history journal *Art Bulletin*.³ Either as a "key monument of the Golden Age"⁴ or a "splendid temple"⁵ of the nation, Zuart'noc' occupies a central position in the history of Armenian culture.

The church is important both historically and architecturally. Forming part of the residential complex of the patriarch Nersēs III (ca. 641–ca. 661), Zuart'noc' was built during arguably the greatest crisis of the early Middle Ages. By the 630s, the southern Caucasus had become a theater of war between the Byzantine and Persian empires; and the early 640s saw the first Arab offensives in the region, prior to the establishment of Armenia as an Umayyad client state.⁶ Consolidating the strategic territory of the Armenian plateau became the goal of Emperor Constans II, who, like his predecessor Heraclius, sought political alliance with and doctrinal conformity from the Armenians. Nersēs offered Constans both, which is attested in written sources

3 W. E. Kleinbauer, "Zvart'notz and the Origins of Christian Architecture in Armenia," *ArtB* 54, no. 3 (1972): 245–62.

4 P. Donabédian, *L'âge d'or de l'architecture arménienne* (Marseille, 2008), 190.

5 S. Mnac'akanyan, *Zvart'noc' ev nuynatip hušarjanner* (Erevan, 1971), 5.

6 *The Armenian History Attributed to Sebeos*, trans. R. W. Thomson with J. Howard-Johnston and assistance by T. Greenwood, 2 vols. (Liverpool, 1999).



FIG. 1. Aerial view of Zuart'noc' looking southeast (photo: Hrair Hawk Khatcherian)

and, as many have argued, expressed in the church of Zuart'noc' itself.⁷

The striking appearance of the church also merits close attention. Turning south from the road leading from Erevan to the holy city of Ejmiacin, one confronts an expansive stone platform five meters tall, which forms a paved walkway around the ruins of the church (fig. 1). The perimeter wall, elevated three steps higher on a round stylobate, is a polygon of thirty-two sides preserved in a segment of only a few meters. Its five portals access a circular ambulatory, screened from the domed naos by exedrae of stubby columns at the west, north, and south. Between these curvatures stood four massive piers fronted by single columns. Ionic basket capitals with Greek monograms of the patron topped the columnar exedrae, while the single columns of the dome piers carried large sculpted eagles with outstretched

wings. The interior of the ambulatory bore alternating gabled and round-arched pediments, while the exterior wall was sheathed in continuous blind arcades. Above these were carved grapevines and pomegranate trees, and nestled in the spandrels were figures holding tools of construction. A sundial bearing an Armenian inscription was excavated at the site, and was most likely positioned on the south façade of the church.⁸

As this short description suggests, a full account of the church and the historical moment in which it was produced would surely occupy many volumes. While a number of publications have considered problems of historical context and interpretation, this study addresses the archaeological evidence and the original appearance of the church. Lying in ruin for at least nine

⁷ See most recently Donabédian, *L'âge d'or*, 190–98 and A. Kazaryan, *Cerkovnaia arkhitektura stran zakavkaz'sia VII veka*, 4 vols. (Moscow, 2012), 2:492–553.

⁸ An Urartian stele may also have formed part of the seventh-century complex. Scholars have thus far set this object aside in discussions of the church, but its excavation at the pavement level, and the common medieval practice of spoliation, obliges us to consider its presence more carefully.

centuries, Zuart'noc' has formed the subject of several hypothetical reconstructions. As familiar as they are to historians of Armenian and Byzantine architecture, the material basis upon which they are composed is surprisingly under-examined. To what extent are the crisp line drawings published in secondary literature based on archaeological evidence? What, precisely, is the excavation history of the monument, and what is the basis for the vigorous scholarly debates about its original appearance? These questions guide the following essay, and necessitate the detailed examinations found herein. The answers suggest a much more complex picture of the monument than previously acknowledged. I show here the compromised nature of the excavations and the tenuous nature of the arguments, in which multiple reconstructions were proposed and experimented with by single authors and within single works. This complexity is not typically reflected in studies of Armenian and Byzantine architecture, in which the question is often reduced to a choice between two hypotheses.⁹ This dichotomy is perhaps further encouraged by the greater accessibility of the published drawings as opposed to the texts that once explained them, which are written in Armenian and Russian and are often densely technical. This essay also lays out for the reader the state of the question of the original appearance of Zuart'noc', considering the three criteria used in the design and evaluation of the reconstructions: archaeological evidence, structural stability, and historical precedent. In this way, I hope to offer nuance to the discussion of the original appearance of Zuart'noc', and a basis for future consideration of the problem. Analysis and synthesis of the material presented here offer a crucial first step for those who seek to discuss the form of Zuart'noc'.

The various reconstructions of Zuart'noc' speak to the specific visions and goals of their creators. They reflect (and project) opinions about the origins of Zuart'noc', and, more broadly, about the Armenian architectural tradition and its relation to neighboring cultures. In more recent scholarship, however, these drawings are often selected for illustration with little or no explanatory commentary. They have increasingly gained authority (even iconicity, in the case of T'oramanyan's design), while their function as

⁹ See for example, S. Der Nersessian, *L'art arménien* (Paris, 1977), 43–45 and J.-M. Thierry and P. Donabédian, *Les arts arméniens* (Paris, 1987), 594–95.

a tool of argument has become obscured. In this sense, Zuart'noc' presents a case study in the challenges of the hypothetical reconstruction.

The Church and Its Excavations

Zuart'noc' today is a tourist site. Even a short visit to Armenia usually includes a stop at the church, often recorded in photographs taken with Mount Ararat in the background. The ruins of the church and patriarchal residence are carefully groomed, with sculptural fragments placed in groupings throughout the site (fig. 2). The residence survives as a network of walls rising, on average, about two meters in height. Along the perimeter of the church are some of the original capitals, and to the east of the platform, on the ground, is a vast expanse of stones from the elevation. They appear to be loosely organized by their position on the church; at the time of this writing, five facets of the first tier of the church had been assembled from the fragments. In a small museum to the southwest are some of the most significant finds from the excavation, including the sundial, the foundation inscription, and a mosaic.

The current appearance of the church reflects an ongoing campaign of reconstruction that began in the 1940s. The comparison of an excavation photograph (fig. 3) with the present church makes clear the extent of these efforts. The stylobate walls, including the apsidal curvature, have been restored using the anastylosis method, in which materials are returned to their original positions, and sometimes combined with new materials. Columns of the exedrae have been erected and topped with capitals, and at the south they are further surmounted by a profiled arcade. The dome piers, whose rubble and mortar core was largely exposed in early photographs, now rise high into the air, and their upper courses have been refaced with new tuff-stone slabs. Three of the four magnificent eagle columns have also been set in place.

These and other modern interventions are not differentiated from the original structure in any systematic way. The visitor to Zuart'noc' must make a judicious examination and comparison of individual elements in order to identify the reconstruction work. In some cases, the distinction seems fairly clear; for example, the western portal has been reconstructed using new, uncarved stones combined with original sculpted elements. For the most part, however, one must attend to



FIG. 2. View of the ruins to the East of the Church (photo: author)

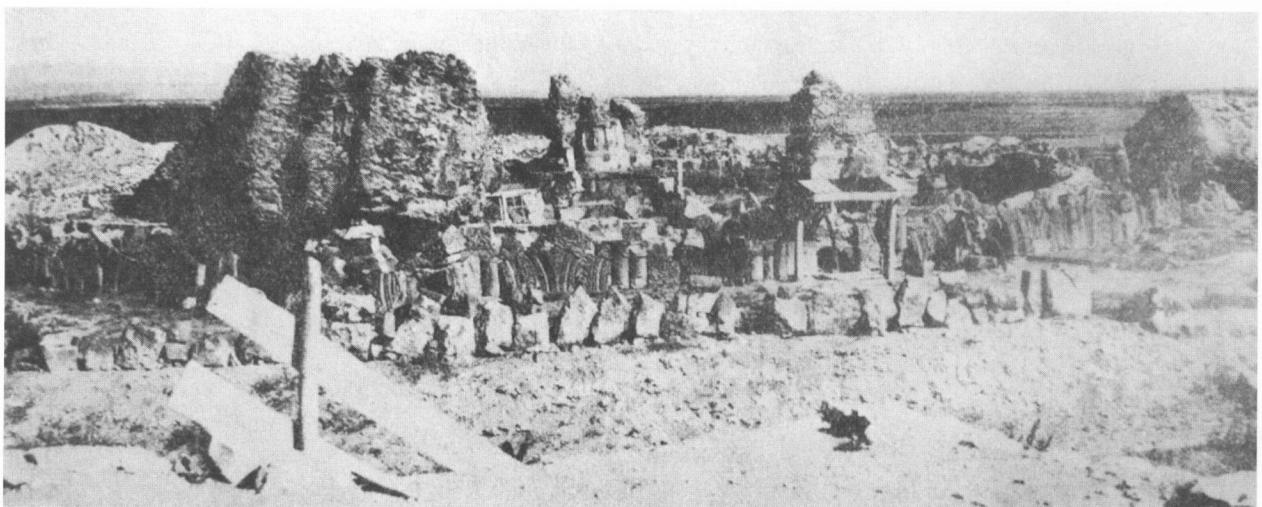


FIG. 3. Photograph from the excavations of Zuart'noc', ca. 1900 (T. T'oramanyan, *Nyut'er Haykakan Čartarapetut'eān*, 1:241, fig. 150)

differences in the surface quality of the stone. Often, the contrasts in weathering are very sharp, as is the case with the pavers and many of the facing stones of the remaining elevation.¹⁰ With regard to the monogrammed capitals of the exedrae, even a cursory examination of the condition of the stone, carving style, and paleography reveals that ten of the eighteen capitals are not original.¹¹ But of course such visual analysis is not foolproof, and not all the stones may be differentiated with confidence. For these reasons, any conclusions based on the present appearance of the monument must be drawn with care.

The tidy completeness of Zuart'noc' today bears little resemblance to its appearance prior to excavation. In 1893, according to one scholar, it looked like "a small heap rising from the plain."¹² The site was known to be quite old: as early as 1890, Łewond Ališan associated it with the church of Nersēs.¹³ It was known locally by various names, including Zuart'noc', the Church of Saint Gregory, or simply the "ruined church" (*hangac ekelec'i*).¹⁴ More identifying evidence was discovered by Josef Strzygowski upon his visit to the monastery of Ējmiacin in 1887.¹⁵ There, he noticed four Ionic monogrammed capitals lying in the courtyard of the monastic academy, the Kēvorkyan Čemaran. Strzygowski made a close study of the monograms, and linked them to Nersēs III and the church of Zuart'noc'. A conversation with Armenian scholar Nicolaus Karamianz confirmed his theory. Karamianz recalled that the four capitals had been transported to the monastic academy

10 For example, a close inspection of the southern inner face of the eastern apsidal curvature shows a clear distinction between the first visible course, which is highly weathered, and the remaining courses. While the nature and extent of the intervention in this area is unclear, on 14 February 1961 Tiran Marut'yan reported that the stones were "cleaned" (*mak'rel ein*) and that he was able to view the exposed mortar surfaces of the eastern apse (Marut'yan, *Zuart'noc' ev zuart'noc' atip tačarner* [n. 1 above], 36).

11 What appear to be eight original capitals are positioned on the exedrae columns: three in the north exedra, three in the west, and two in the south.

12 K. J. Basmadjian, "La stèle de Zouarthnotz," *Recueil de travaux relatives à la philologie et à l'archéologie égyptiennes et assyriennes* 23 (1901): 145–51.

13 Ł. Ališan, *Ayrarat* (Venice, 1890), 244.

14 J. Strzygowski, *Das Etschmiadzin-Evangeliar: Beiträge zur armenischen, ravennatischen, und syro-ägyptischen Kunst* (Vienna, 1891), 14.

15 Ibid.

in 1875, when he was a student there. Two, he remembered, were brought from the southern courtyard of the monastery of Ējmiacin. The other two "were brought [to the academy]; not, however, from [Ējmiacin] itself, but rather from a place called 'the ruined church,' which lay four *verst* from Ējmiacin on the right side."¹⁶ This recollection secured the modern identification of Zuart'noc' with the ruins near Ējmiacin, a finding published by Strzygowski in his 1891 volume, *Das Etschmiadzin-Evangeliar*. The significance of this work was quickly recognized, and in 1892 it was published in an Armenian translation.¹⁷ With the appearance of this book, local interest in the site grew. In the summer of 1893, excavations began with permission from the Russian Imperial Archaeological Commission and under the authority of the patriarchal see of Ējmiacin.

A history of the Zuart'noc' excavations is extremely difficult to write, because of the sparse and confusing nature of the documentation. Our knowledge of the campaigns derives primarily from two sources: the essays of the first excavator, Mesrop Tēr-Movsisean, and the graphic materials and essays of the architect T'oros T'oramanyan.¹⁸ A superior (archimandrite) of the monastery of Ējmiacin and future archbishop, Tēr-Movsisean was trained as a philologist, and published works on medieval Armenian literature, inscriptions, and manuscript illumination.¹⁹ The first essay authored by Tēr-Movsisean on Zuart'noc' reports the results of the excavations until 1900, and appeared in 1903 in Russian.²⁰ A second report, published in two successive issues in 1907 of the Armenian journal *Azgagrakan Handēs*, substantially enlarged upon the prior essay, and surely constitutes one of the most important contributions to the early study of the site.²¹

16 Ibid., 12.

17 J. Strzygowski, *Ējmiacni Awetarana* (Vienna, 1893).

18 On Mesrop Tēr-Movsisean, see G. Tēr-Vardanean, *Mesrop Magistros Ark'episkopos Tēr-Movsisean* (Erevan, 1999).

19 For some of these titles, see A. M. Avakian, *Armenian Folklore Bibliography* (Berkeley, 1994). I thank James R. Russell for bringing this volume to my attention.

20 M. Tēr-Movsisean, "Raskopki razvalin cerkvi sv. Grigorija vlez Ečmiadzna," *Izvestija imperatorskogo arkheologicheskogo komissiiia* 7 (1903): 1–48.

21 M. Tēr-Movsisean, "Ējmiacin ew hayoc' hnagoyen ekelec'iner," *Azgagrakan Handēs* 15, no. 1 (1907): 85–132 and *Azgagrakan Handēs* 16, no. 2 (1907): 130–96. These issues are sometimes catalogued as volume 10, after the year number.

Tēr-Movsisean was chief excavator of Zuart'noc' beginning in 1893. He wrote very little about the results of this initial campaign; in the 1903 essay, we learn only that "work ceased after only one pylon was found." In the 1907 essays, he indicates that "the excavations were begun first on the south side, thus approaching the northwest pier, until we reached the church floor." At this point, however, the project was forced to halt because of problems renewing the excavation permission from the Antiquities Commission. On 29 May 1900, Xač'ik Dadyan, a monk from Ējmiacin, succeeded in obtaining permission and resumed excavations. Not much is known about Dadyan's prior scholarly activities.²² Dadyan continued to excavate until 1907, with a one-year interruption in 1905 when, according to his own testimony, he was sent into exile (according to Tēr-Movsisean, he went to the city of Temnikov in Russian Mordovia).²³ So within ten years, despite at least two interruptions, Tēr-Movsisean and Dadyan unearthed the church and much of the adjacent residence.

Unfortunately, serious problems arose at the excavation site. The ruins appear to have been compromised from the start. Upon his initial survey, Tēr-Movsisean lamented the lack of substantial building remains above ground, suspecting that materials had been removed by local villagers.²⁴ In the 1907 essay in *Azgagrakan Handēs*, he reported evidence of dispersal: two additional monogrammed capitals had been found, one discovered while razing the northern wall of the monastery of Ējmiacin (to construct a new residence), and the other, with the inscription "Katholikou," found in a village cemetery.²⁵ Dadyan also reported that a tombstone with "beautiful carving and writing" was stolen

from the site during his year in exile.²⁶ Remaining fragments, moreover, showed signs of violent damage. Surveying the cracked stones and a large "boulder" of vaulting lying prone, Tēr-Movsisean correctly suspected seismic trauma, for "only the mighty strength of nature could have produced such devastation."²⁷

There were also personal problems. In his essays, Tēr-Movsisean reported Dadyan's delinquency in sending results to the Imperial Archaeological Commission, his unresponsiveness to written queries, and the poor quality of his photographs. He had no specialized education or training, and he had, in Tēr-Movsisean's words, "the stubbornness of a fanatic," who would not listen to historical testimony but became "mired in his own errors."²⁸ Others shared Tēr-Movsisean's frustration, including T'oramanyan. It is further relevant that even after Tēr-Movsisean's permission to continue digging was denied, the Antiquities Commission approached him in Saint Petersburg, rather than Dadyan, who was on-site, to write an archaeological report (resulting in the 1903 essay).²⁹ For this project, Dadyan sent to Tēr-Movsisean his photographs and two short excavation notebooks. Dadyan himself published almost nothing about his own excavations. According to Tēr-Movsisean, he conveyed his discoveries in the form of lectures, in which he claimed to have discovered at Zuart'noc' "old Vałaršapat" (known as Roman Kainopolis or Nor Kałak) and the relics of Gregory the Illuminator. In a single, three-page report published in *Ararat Amsagir*, he reported the discovery of bones possibly belonging to the tomb of Nersēs III.³⁰ While these theories are no longer considered seriously, they apparently circulated at the time, and much of Tēr-Movsisean's historical commentary in both his essays involves presenting the source evidence to discredit any such speculations. Most egregious, in Tēr-Movsisean's view, was Dadyan's association of Zuart'noc' with "old Vałaršapat."³¹ This

22 According to the testimony of S. V. Ter-Avetisyan, Dadyan was actively digging in the Karabakh region, without permission, at kurgan sites. See M. Khalilov, "About Kurgans of Garabagh," in *Garabagh Yesterday, Today, and Tomorrow: Proceedings of Scientific-Practical Conference*, ed. A. Abasov, G. Hajiyev, et al., 2 vols. (Baku, 2009), 2:97–101.

23 X. Dadyan, "Hnagitakan Pełumner 1907," *Ararat: Paštōnakān Amsagir, Hayrapetakan At'oroc'i Ējmiacni*, February, vol. 2 (1909): 171. For the reference to Temnikov, see Tēr-Movsisean, "Ējmiacin ew hayoc' hnagoyn ekelec'iner," 89 n. 1.

24 Tēr-Movsisean, "Raskopki razvalin cerkvi sv. Grigorija," 3–4. See also K. J. Basmadjian, "La stèle de Zouarthnotz" (n. 12 above), 146.

25 Tēr-Movsisean, "Ējmiacin ew hayoc' hnagoyn ekelec'iner," 95.

26 Dadyan, "Hnagitakan Pełumner 1907," 171.

27 Tēr-Movsisean, "Raskopki razvalin cerkvi sv. Grigorija," 32. The demise of Zuart'noc' by earthquake is corroborated by the literary sources and is widely accepted today. See, for example, Donabédian, *L'âge d'or* (n. 4 above), 192.

28 Tēr-Movsisean, "Ējmiacin ew hayoc' hnagoyn ekelec'iner," 96.

29 Ibid, 89.

30 Dadyan, "Hnagitakan Pełumner 1907," 170–73.

31 This view was apparently expressed by Dadyan during lectures, which are referred to with exasperation by both Tēr-Movsisean and later by T'oramanyan. See Tēr-Movsisean, "Ējmiacin ew hayoc'

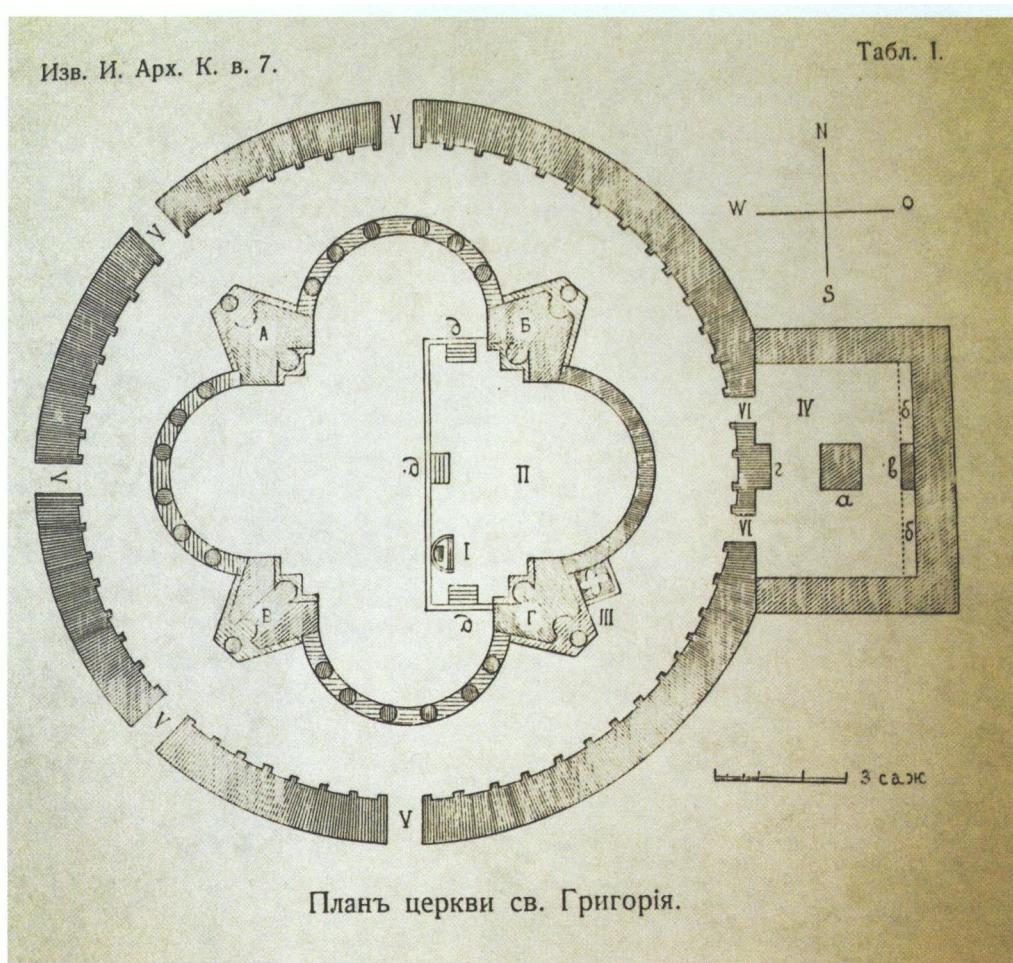


FIG. 4.
Plan of Zuart'noc' by
Tēr-Movsisean, 1903
(M. Tēr-Movsisean,
“Raskopki razvalin
cerkvi sv. Grigorija
vliz Ečmiadzna,”
*Izvestija imperatorskogo
arkheologicheskogo
kommissiiia 7* [1903]: pl. 1)

position was discredited by the archaeological investigations led by Ašxarbek Kalantar in 1931, in which a substantial Roman necropolis was discovered to the east of the church of Hrip'simē.³² This discovery, along with the lack of any settlement contiguous with the site of Zuart'noc', suggested to Kalantar that the two sites were distinct, as Tēr-Movsisean had argued, and that Nor Kałak was located not at Zuart'noc' but at the present site of Ējmiacin. Putting aside the relationship between the history of the foundation of Zuart'noc' and the

hnagoyn ekelec'iner," 99; T. T'oramanyan, "Xač'ik Vartapeti petumneri gitakan aržek'ə," *Xorhrdayin Hayastan* (1927): no. 116, reprinted in idem, *Nyut'er Haykakan Čartarapetut'ean*, 2 vols. (Erevan, 1942–48), 2:288–90; and idem, *Zwart'noc'-Gagkašen* (Erevan, 1984), 77–79.

³² A. Kalantar, "The Excavations of 1931," in *Armenia: From the Stone Age to the Middle Ages; Selected Papers*, ed. G. Karakhianian, trans. V. G. Gurzadyan (Neuchâtel and Paris, 1994), 53–68.

data produced by this excavation, it is enough to note that archaeological investigations put at least one of Dadyan's theories to rest.

Despite personal antagonisms and accusations of incompetence, excavations at Zuart'noc' moved quickly. By 1902 the basic layout of the church was understood. Tēr-Movsisean's 1903 essay includes a plan of Zuart'noc' indicating an inner tetraconch surrounded by a circular perimeter wall with a projecting eastern chamber (fig. 4).³³ Details of the altar area are also shown, including its staircases, the circular "pulpit," and the small quatrefoil font behind the southeast pier.³⁴ Photographs reveal that the perimeter walls were

³³ Tēr-Movsisean, "Raskopki razvalin cerkvi sv. Grigorija," plate 1.

³⁴ This object, long regarded as a pulpit, has recently been reinterpreted by Armen Kazaryan as the base for an enclosure protecting the crypt at the center of the domed area. See A. Kazaryan,

excavated to about three courses, although the faceted exterior surface of these walls had not yet been exposed. Column bases and capitals lay along the curvatures of the tetrachor, and fragments of vegetal decoration lay on the ground next to the church. Mosaic fragments were photographed in their findspot next to the “pulpit.”³⁵ Also recorded were examples of masonry slabs painted with rhomboid forms enclosed in circular shapes, in imitation of opus sectile.³⁶ Inscriptions in multiple languages were also discovered, transcribed, and translated into Russian. The following passages from Ter-Movsisean’s essay offer a comprehensive sense of the findings:

From 23 May to 25 June 1900, seventy-five percent of the church was cleared out, and by 10 July the last quarter was also completed. The following were recovered: a) Plan of the church b) Altar with a stone reliquary in the front c) Bases of columns that circumvent four pylons from three sides d) Four capitals that appear to be Ionic with basketweave e) Four bas-reliefs with huge birds serving as pylon capitals f) Fragment of a mosaic cross g) Sundial with an inscription in Armenian h) Fragment of an inscription in Armenian i) Inscriptions on plastered interior walls in Armenian, Greek, Arabic, Syriac, and Georgian. In addition were many stones with bas-relief ornaments of human figures, cornices with grape and pomegranate branches, stones with lilies, stone crosses, etc. Also found in the earth were different vases, pitchers, huge pithoi or *caras* for wine or grain, clay candlesticks with inscriptions, metal nails, hooks, pieces of rope and material, several coins, etc.³⁷

As the above passage attests, 1900 was a crucial year in the excavations. Not only was the basic layout of the complex revealed, but so was a rich corpus of sculpture and epigraphy. The 1903 essay also reveals the

“The Chancel and Liturgical Space in the Church of Zuart’noc,” in *Ikonostas: Proiskhozhdenie, Razvitie, Simvolika*, ed. A. M. Lidov (Moscow, 2000), 85–104 (in Russian).

³⁵ Tēr-Movsisean, “Raskopki razvalin cerkvi sv. Grigorija,” pl. 9.

³⁶ Ibid., pl. 21.

³⁷ Ibid., 15. I thank Lana Sloutsky for this English translation.

discovery of several other elements of Zuart’noc that have yet to receive sufficient examination, including the interior polychromy, the sundial, and the Urartian stele.

The 1903 and 1907 essays of Tēr-Movsisean also include some of the first attempts at a chronology and historical interpretation of the church. Some of the author’s views, like those of Dadyan, have now been set aside; Tēr-Movsisean identified the central crypt, for example, as a baptismal font.³⁸ Yet he also published the first comparison of the monument with the building traditions of Syria and Byzantium, and sought an interpretation of its program within the context of biblical and Armenian literary symbolism. Tēr-Movsisean did not attempt any detailed theory regarding the elevation of the church. This seems to be due both to his admitted lack of archaeological expertise and to the compromised nature of the materials. Thus while he found “no reason to doubt that the church had a stone roof and a tall cupola,” he could not envision the arrangement of the exedrae, which was “much too destroyed.” In order to form a hypothesis, he wrote in 1903, “a specialized archaeologist would have carefully to examine all the remains.”³⁹

T’oramanyan and Zuart’noc

In 1904, Dadyan hired T’oros T’oramanyan to undertake precisely that task. A respected architect by this time, T’oramanyan had practiced in Bulgaria and settled in Paris.⁴⁰ The previous year, T’oramanyan heard Dadyan give a lecture on the excavations, and visited the site for the first time. In an essay published in 1927, he recalled his excitement about the monument: “Naturally it interested me a great deal, and I quickly travelled to see the monument’s excavations,

³⁸ The identification of the central structure as a baptismal font was comprehensively (and persuasively) critiqued by Mnac’akanyan in his monograph. (See Mnac’akanyan, *Zvart’noc’ ev nuynatip bušarjanner* [n. 5 above], 45–48, for discussion and drawings of the archaeological remains of the central structure. Mnac’akanyan’s reconstruction of the central structure with a canopy is illustrated on p. 98, fig. 26.)

³⁹ Tēr-Movsisean, “Raskopki razvalin cerkvi sv. Grigorija,” 19.

⁴⁰ For a consideration of T’oramanyan and his work, see C. Maranci, *Medieval Armenian Architecture: Constructions of Race and Nation* (Louvain, 2001), 43–78.

which so many had praised.”⁴¹ In March of 1904, he arranged to stay in Ējmiaçin, invited by Dadyan and encouraged by Catholicos Xrimean “Hayrik.” It was agreed that T’oramanyan would work at Zuart’noc’ for four months to study the building and propose a reconstruction.

Upon arrival, however, T’oramanyan despaired at the condition of the site. Surveying the ruins he, like Tēr-Movsisean, suspected both earthquake damage and vandalism.⁴² The more pressing problem was, yet again, the incompetence of Dadyan. In 1927, he remembered the impossibility of completing a task in such a short time: “Those four months were not enough to do the work. The excavations were not complete: the center of the church was cleared but the exterior was still unexcavated. . . . The excavations themselves were absolutely aimless and unscientific in form.”⁴³ T’oramanyan minced no words regarding his dissatisfaction with the excavations. In an essay entitled “The Scientific Value of the Excavations of Xač’ik Vartapet,” he lamented the unprofessional nature of the dig and the absence of a supervisory architect, reminding the reader that

at the time of excavation, when the secrets of the monument are still intact, the excavations must be carried out by a supervisory architect, who is able to assemble the fragments for measuring and drawing. These measurements and drawings are then used by the architect at the table for answering questions of the reconstruction.⁴⁴

T’oramanyan, like Tēr-Movsisean, was repelled by Dadyan’s historical theories. He makes reference to Dadyan’s “long speeches,” in which Zuart’noc’ was imagined in “the ridiculous form of an ancient Armenian fire temple.”⁴⁵ Even worse, according to T’oramanyan, Dadyan invited inexperienced students and draughtsmen to render the church. Dadyan’s “ner-

⁴¹ T’oramanyan, “Xač’ik Vartapeti pełumneri gitakan aržek’ə” (n. 31 above).

⁴² Idem, “Noraguyn Karcik’ner hay čartarapetut’yan šrjanner,” *Anahit* nos. 9–12 (1911): 204; reprinted in idem, *Zuart’noc’-Gagkašen* (n. 31 above), 31–32.

⁴³ T’oramanyan, “Xač’ik Vartapeti pełumneri gitakan aržek’ə,” 78.

⁴⁴ Ibid.

⁴⁵ Ibid., 79.

vous spirit” (*jtagrgir ogeworut’yun*), he felt, may have accounted for his reluctance to hire a supervisory architect from the outset.⁴⁶ Clearly, professional rivalries seem to have compromised leadership at the worksite, both before and after T’oramanyan’s arrival. Such contentiousness obliges us to treat the early archaeological literature on Zuart’noc’ with particular care.

Nevertheless, work at the site seems to have progressed, to judge by a comparison of ground plans (see figs. 4 and 5). Precisely when T’oramanyan composed his plan (fig. 5) is unclear; according to Step’an Mnac’akanyan it was most likely created in 1904, during T’oramanyan’s first year at the site.⁴⁷ A sure *terminus ante quem* is 1907, when the plan appeared in *Azgagrakan Handēs*.⁴⁸ What is certain, however, is that it reflects several new discoveries, completing and correcting the initial plan published in 1903. First, T’oramanyan’s plan of the church reveals the excavation of the perimeter wall, the stylobate, and the polygonal platform. A comparison with the plan in Tēr-Movsisean’s 1903 publication suggests that the excavations proceeded from the interior to the exterior of the church. While Tēr-Movsisean indicated a perimeter wall that was circular on both the interior and exterior, T’oramanyan showed the faceted aspect of the façade, its embrasured windows, and its decoration with a blind arcade of double colonnettes. The five portals are more fully articulated in the new plan—represented in 1903 as simple gaps in the perimeter wall, T’oramanyan identifies five projecting porches, two smaller, on the diagonals, and three larger, at the west, north, and south. His plan indicates interior liturgical elements, including, for the first time, the central crypt with its stairs. T’oramanyan’s conception of a three-tiered elevation is also suggested in the plan: within the rotunda, a second circle connects the outermost points of the exedrae, while a third is inscribed within the four main piers.

Volume 16 of *Azgagrakan Handēs* also includes, to my knowledge, the first published plan of the patriarchal residence (fig. 6).⁴⁹ According to Tēr-Movsisean,

⁴⁶ Ibid., 78.

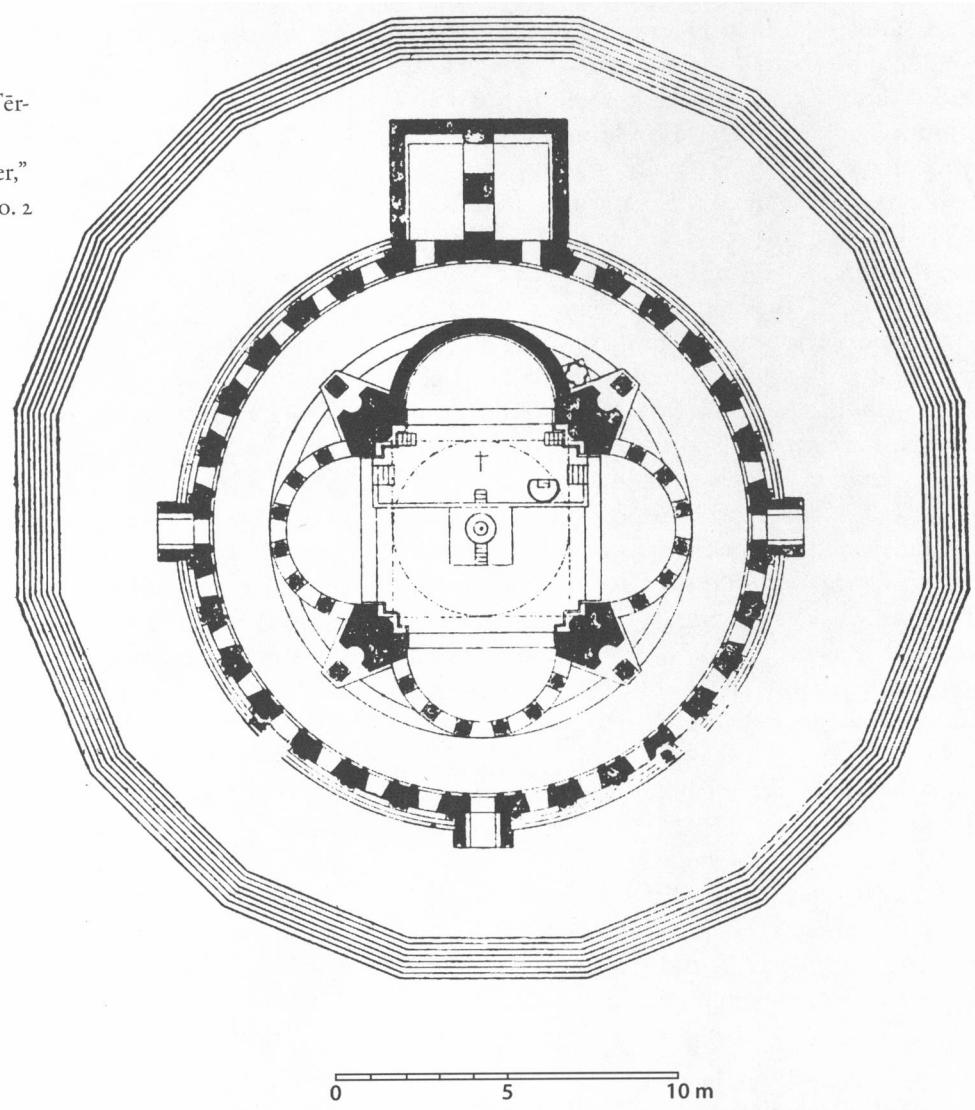
⁴⁷ Mnac’akanyan, *Zuart’noc’ə ev nuynatip hušarjanner* (n. 5 above), 61–62.

⁴⁸ Tēr-Movsisean, “Ējmiaçin ew hayoc’ hnagoyn ekelec’iner,” (n. 21 above) 131.

⁴⁹ Ibid., 152.

FIG. 5.

Plan of Zuart'noc' by T'oramanyan, 1905 (M. Tēr-Movsisean, "Ējmiacin ew hayoc' hnagoyn ekelec'iner," *Azgagrakan Handēs* 16, no. 2 [1907]: 131)



excavation of this area of the site had begun in 1901, and in his 1903 essay he describes its layout in some detail. Yet he also complains that "much remained to be done before the final cleaning," and that Dadyan had not yet produced a report on this area of the excavation.⁵⁰ The published plan reveals the extent of Dadyan's progress, showing, at the south, a series of small, square chambers screened at the north by a portico that faces the church. At the southwest are larger rooms, including a capacious rectangular structure. The plan is clearly

schematic, however, providing only the essential outlines of the structures. A comparison of this drawing with T'oramanyan's plan of the residence published in 1918 in Josef Strzygowski's *Die Baukunst* (fig. 7) underlines the rough nature of the earlier drawing.⁵¹ The 1918 plan indicates the thick, attached piers of the square, southern chambers, the western piers of the large rectangular structure at the southwest, the slight eastern deviation of the southeasternmost chambers, and the cruciform shape of the piers of the portico.

50 Tēr-Movsisean, "Raskopki razvalin cerkvi sv. Grigorija" (n. 20 above), 15.

51 J. Strzygowski, *Die Baukunst der Armenier und Europa* (Vienna, 1918), 109, fig. 108.

This plan shows that by the close of the excavation, the layout of the complex had been revealed almost to its current extent.

Envisioning the elevation of Zuart'noc' was more problematic. Looting and seismic damage surely deterred the process, but so did the use of explosives. According to T'oramanyan, Dadyan wished to clear the center of the tetraconch, where large fragments of the dome lay. Unable to move them, Dadyan decided upon an unfortunate solution:

On the first day of clearing the middle of the church, after tossing out stone fragments and pieces of mortar, there remained huge stone pieces, which revealed the particular form of the dome and its decoration; these were blasted with gunpowder (*varədov payt'ec'rel*) and turned into dust, because such massive stones were impossible to lift or to be broken up with tools.⁵²

Precisely when and for how long such blasts occurred at Zuart'noc' is unclear. As an archaeological method, low and high explosives were not unusual tools for the time. Richard William Howard Vyse famously blasted into Menkaure's pyramid at Giza using gunpowder, while Thomas Gann used dynamite at the Maya ruins of Lubaantun in 1903.⁵³ At Zuart'noc', as at those ancient sites, the damage was irrevocable. Dadyan's explosions targeted fragments of the upper elevation, which, according to T'oramanyan, revealed the nature of the superstructure.⁵⁴ This damage eliminated any possibility of a conclusive reconstruction. In his sixties, T'oramanyan lamented that "under the spade of Xač'ik *vartapet*, [Zuart'noc'] was lost in its entirety, to the detriment of the history of art."⁵⁵ In the same essay, he recounted his success in halting the blasts, so that Dadyan "promised to preserve intact the

52 T'oramanyan, "Xač'ik Vartapeti" (n. 41 above), 78.

53 On Vyse, see D. Palmer, P. G. Bahn, and J. Tyldesley, *Unearthing the Past: The Great Archaeological Discoveries That Have Changed History* (London, 2004), 43. On Gann, see most recently J. Wainwright, *Decolonizing Development: Colonial Power and the Maya* (Malden, 2008), 145 n. 64.

54 T'oramanyan, "Xač'ik Vartapeti," 78.

55 Ibid., 79.

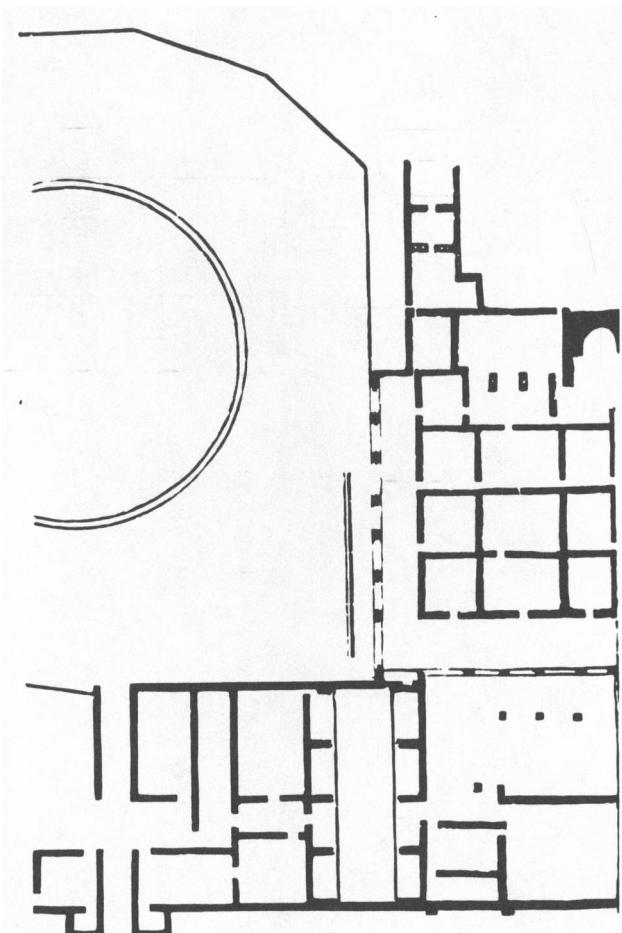


FIG. 6. Plan of the patriarchal residence at Zuart'noc' published in 1907 (M. Tēr-Movsisean, "Ējmiacin ew hayoc' hnagoyn ekelec'iner," *Azgagrakan Handēs* 16, no. 2 [1907]: 152)

large pieces of the exterior as reliable evidence for the reconstruction."⁵⁶ Putting a stop to the explosions, T'oramanyan protected the remaining archaeological materials for future scholarship. This has not been sufficiently acknowledged; while T'oramanyan is best known for his visual documentation of the church, perhaps he ought to be even more celebrated for the steps he took to safeguard the ruins themselves.

Looted, blasted, and unsystematically excavated, the ruins of Zuart'noc' must have presented T'oramanyan with a formidable challenge. While he

56 Ibid., 78.

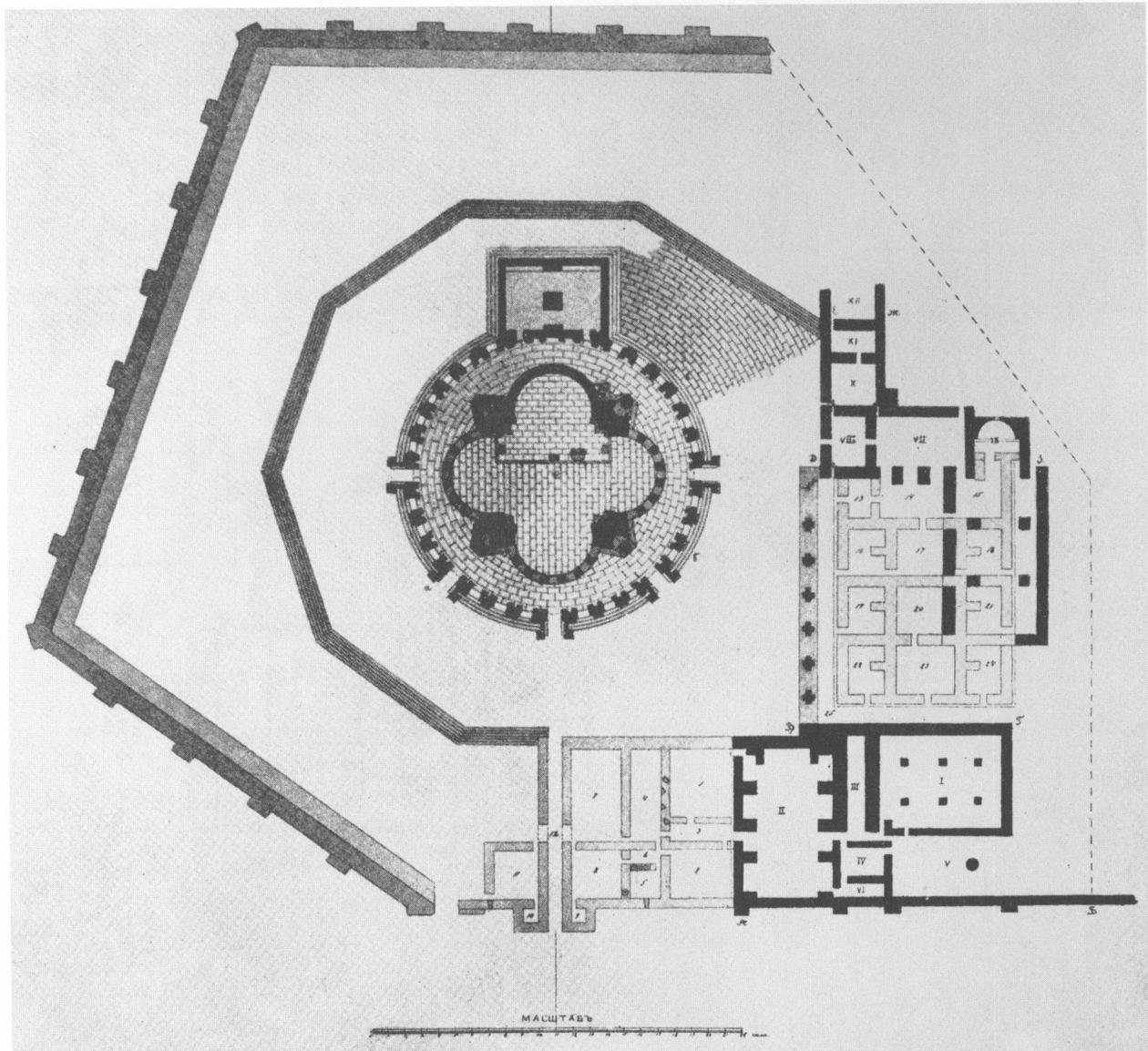


FIG. 7. Plan of the patriarchal residence published in 1918 (J. Strzygowski, *Die Baukunst der Armenier und Europa* [Vienna, 1918], 109, fig. 108)

lamented that many aspects of the church had been forever lost, particularly the interior, he felt that serious study and measure of remaining fragments would provide some sense of the building's form. In a 1905 essay published in the journal *Murč*, T'oramanyan wrote about the reconstruction project and his increasing focus on one aspect of the plan: the single columns accompanying each of the four domical piers. These, he felt, gave him a clue to the disposition of the upper levels:

Initially one is confused by the ground plan with its many extraordinary elements: here and there are seemingly random columns, niches, and capitals with unusual forms. Upon reflection, however, their composition takes hold with such grace that there remains nothing for us to do but wonder at the cleverness and ingenuity of the architect. I, like many others, had long considered the following question: what was the purpose of the four single, round

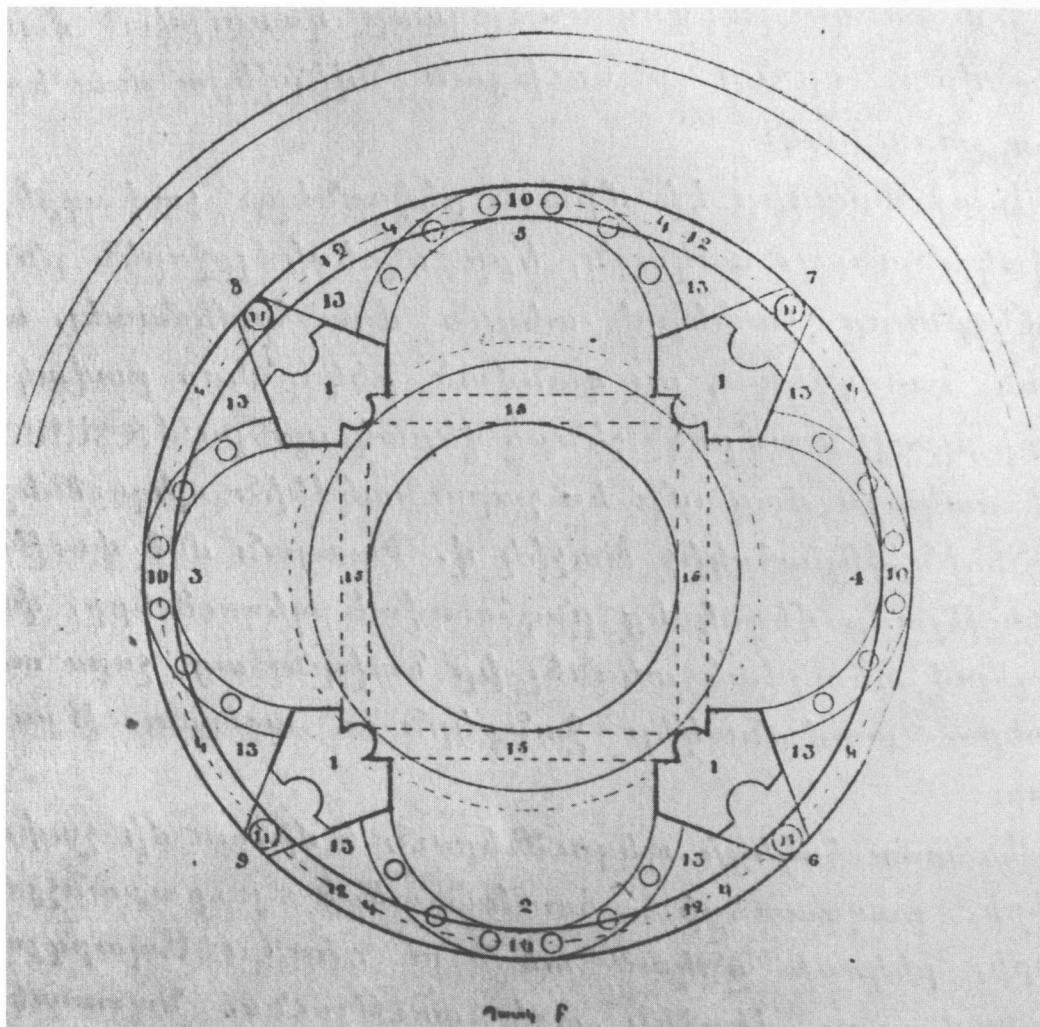


FIG. 8. Schematic plan of Zuart'noc' by T'oramanyan, 1905
(T. T'oramanyan,
Zvart'noc'-Gagkašen
[Erevan, 1984], 28)

columns positioned behind the domical piers, which were thicker than the columns of the exedrae and supported very strange capitals of unequal sides, carved on the front with beautiful winged eagles? For me, their purpose was clarified gradually. [They] served not only for the purposes of decoration and grace but also an extremely important function.⁵⁷

That function was demonstrated by T'oramanyan through a series of diagrams printed in the essay. "Figure B" shows a schematic ground plan of the church (fig. 8).

⁵⁷ T. T'oramanyan, "The Church of Zvart'noc'," *Murč* no. 5 (1905): 186–97; reprinted in idem, *Zvart'noc'-Gagkašen* (n. 31 above), 26–27.

Here, T'oramanyan has connected with circles the apsidal curvature, the columnar exedrae, and the single columns topped with eagle capitals and positioned nearest to the piers. The circle connecting the eagle columns indicates a series of eight arches, which formed the base of support for the second tier of the church. Irregular upper-level chambers, referred to as *paharan-ner* (compartments or cabinets), were thus created in the spaces above the piers, although T'oramanyan is unsure how they would have been accessed.⁵⁸ Thus the single eagle columns played a key role in T'oramanyan's proposal of a round second tier. Finally, a third tier was suggested by T'oramanyan based on the four massive

⁵⁸ Ibid., 30.

FIG. 9.
One of the
eagle capitals
of Zuart'noc'
(photo: author)



FIG. 10.
View of pavers
(photo: author)



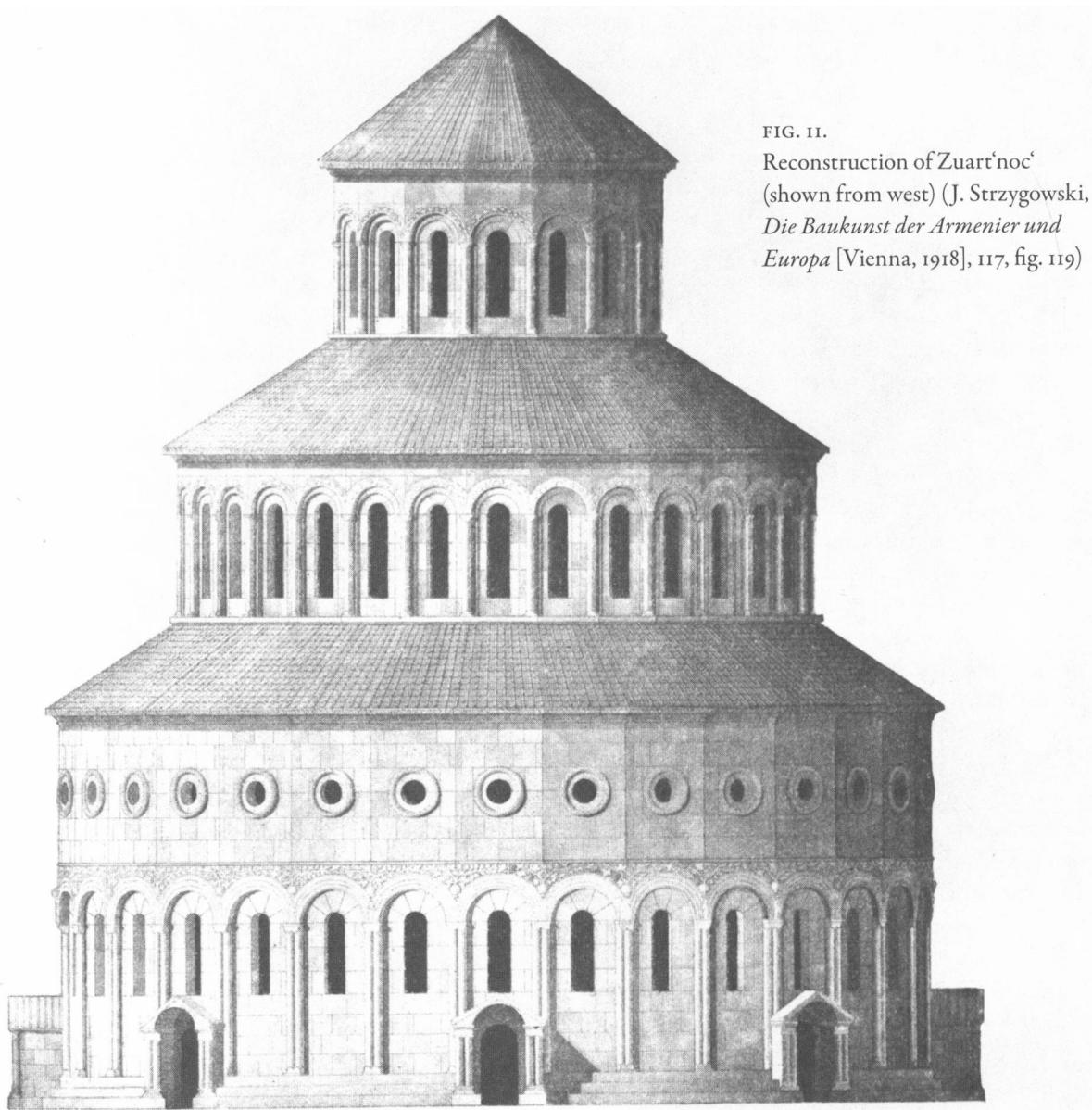


FIG. II.

Reconstruction of Zuart'noc'
(shown from west) (J. Strzygowski,
*Die Baukunst der Armenier und
Europa* [Vienna, 1918], 117, fig. 119)

piers. Toward the center the piers form right angles with engaged colonnettes in their inner corners. For T'oramanyan, this arrangement resembled the central bay of other contemporary churches in Armenia, and implied the presence of a dome above. Thus he conceived of Zuart'noc' as a series of three levels, in which the cylindrical second tier rested on an arcade created by the piers and exedrae of the first level.

In many ways, this scheme accounted for the anomalous features of the plan. Not only did it explain the insertion of the eagle columns within the tetraconchal core of the church, it also accounted for the strange

trapezoidal form of the capitals themselves (fig. 9). The structural role of the eagle columns is suggested by the fact that the same trapezoidal form, with lateral angles of 115 degrees, is used for the stylobate on which the column and dome pier rest. The patterns of the pavers also suggest a round superstructure: in the tetraconch the stones are laid to echo the four projecting conches, and in the ambulatory they are laid in large, concentric circles. Between these two sections, in precisely the area of T'oramanyan's proposed round second level, is a circular ring of pavers (fig. 10). Although it is impossible to be sure of its accuracy, the ingenuity of T'oramanyan's

solution is clear enough, and attests to the work of an individual who probably knew Zuart'noc' better than any of his contemporaries. It is further noteworthy that Step'an Mnac'akanyan, who launched the most comprehensive alternate proposal for the elevation of Zuart'noc', preserved T'oramanyan's system in his own reconstructions of the church.

T'oramanyan's elevation drawing of Zuart'noc', which appeared in Strzygowski's *Die Baukunst*, is a dramatic and complete vision of the building that delineates each facet, facing stone, and roof tile, evoking three-dimensionality with subtle chiaroscuro (fig. 11).⁵⁹ Depicting the church from the west, T'oramanyan drew a strong raking shadow across the projecting portals and cornices. The five doors of the western half of the building are shown with a range of windows within blind arcades above. In the spandrels of these arcades are sculptural pieces, which are enclosed above by a horizontal stringcourse. The stringcourse seems to divide the lower level of the first tier from the row of oculi above. The second story repeats the blind arcading of the first, as well as the cylindrical form and number of sides; it is essentially a diminutive version of the level below. The blind arcade of the second level frames a row of large, arched windows, and creates the sense of an open and illuminated interior. The final tier of the drum has sixteen sides, each articulated by arcades and windows, and is topped with a faceted, conical roof.

This image is by far the most frequently published of any produced by T'oramanyan. Following its publication in *Die Baukunst* it appeared in multiple works, and for many decades this reconstruction served as the authoritative model.⁶⁰ Yet it must be stressed that T'oramanyan produced many versions of Zuart'noc'. He reconsidered the monument many times, composing plans, cross-sections, exterior views, and even a wooden model over the course of more than ten years.⁶¹ A comparison of these representations shows

59 Strzygowski, *Die Baukunst*, 117, fig. 119.

60 It continues to be reproduced (and presented as authoritative) in more recent publications, such as Cyril Mango's *Byzantine Architecture* (New York, 1978), 104, fig. 147 (lower) and V. Harut'yunyan's *Haykakan Čartarapetut'yan Patmut'yun* (Erevan, 1992) 150–51, figs. 39–40. In both the publications, the design has been redrawn.

61 In addition to the plans discussed here, it is claimed by Mnac'akanyan that there are two more variants of the ground plan that first appeared in "Strzygowski's work" (presumably *Die*

significant variations in how T'oramanyan conceived of the building. Making sense of these variations is difficult because of T'oramanyan's protracted engagement with Zuart'noc' and the manner in which his work was published. He never completed a monograph on the church during his lifetime. Rather, his thoughts about Zuart'noc' appear piecemeal in two posthumous anthologies, *Nyut'er Haykakan Čartarapetut'ean* (Materials for the Study of Armenian Architecture) and *Zuart'noc'-Gagkašen*.⁶² The latter is a collection of writings on the two monuments, including passages from *Nyut'er*, as well as published articles, letters, and field notes. This volume is of exceptional importance to the study of Zuart'noc'; but because of its compilatory nature, it is of limited use in determining the chronological development of T'oramanyan's ideas and explaining changes in his representations.

Given the variety of T'oramanyan's renderings and the problem of their relative chronology, one must be careful of attributing to him a single vision of Zuart'noc'. This point is not stressed enough in the secondary literature, which has tended to privilege one particular set of his reconstructions (including the drawing in fig. 11) to the exclusion of the others. The following survey hopes to emphasize the artificiality of this position. Revealing a range of changes, from the arrangement of the exterior façade to the form of the tetraconchal interior, T'oramanyan's representations of Zuart'noc' attest to a fluid and ongoing engagement with the building. They also reveal the influence of new archaeological data that was emerging from both Zuart'noc' and the medieval city of Ani, where T'oramanyan also worked in the first years of the twentieth century.

The first dated plan of Zuart'noc' by T'oramanyan was published in an essay he wrote for the 1905 volume of the Armenian journal *Murč* (fig. 12).⁶³ Careful comparison of its details, measurements, and handwriting reveals that this is the very same drawing that later appeared in *Die Baukunst* (fig. 13) except for a single, crucial element: in the 1905 essay, the eastern apse of the

Baukunst), but I have found no evidence for this. See Mnac'akanyan, *Zwart'noc's ev nuynatip hušarjaner* (n. 5 above), 62.

62 See n. 31.

63 T. T'oramanyan, "The Church of Zwart'noc'," *Murč*, no. 5 (1905): 186–97; reprinted in idem, *Nyut'er Haykakan Čartarapetut'ean*, 1:247.

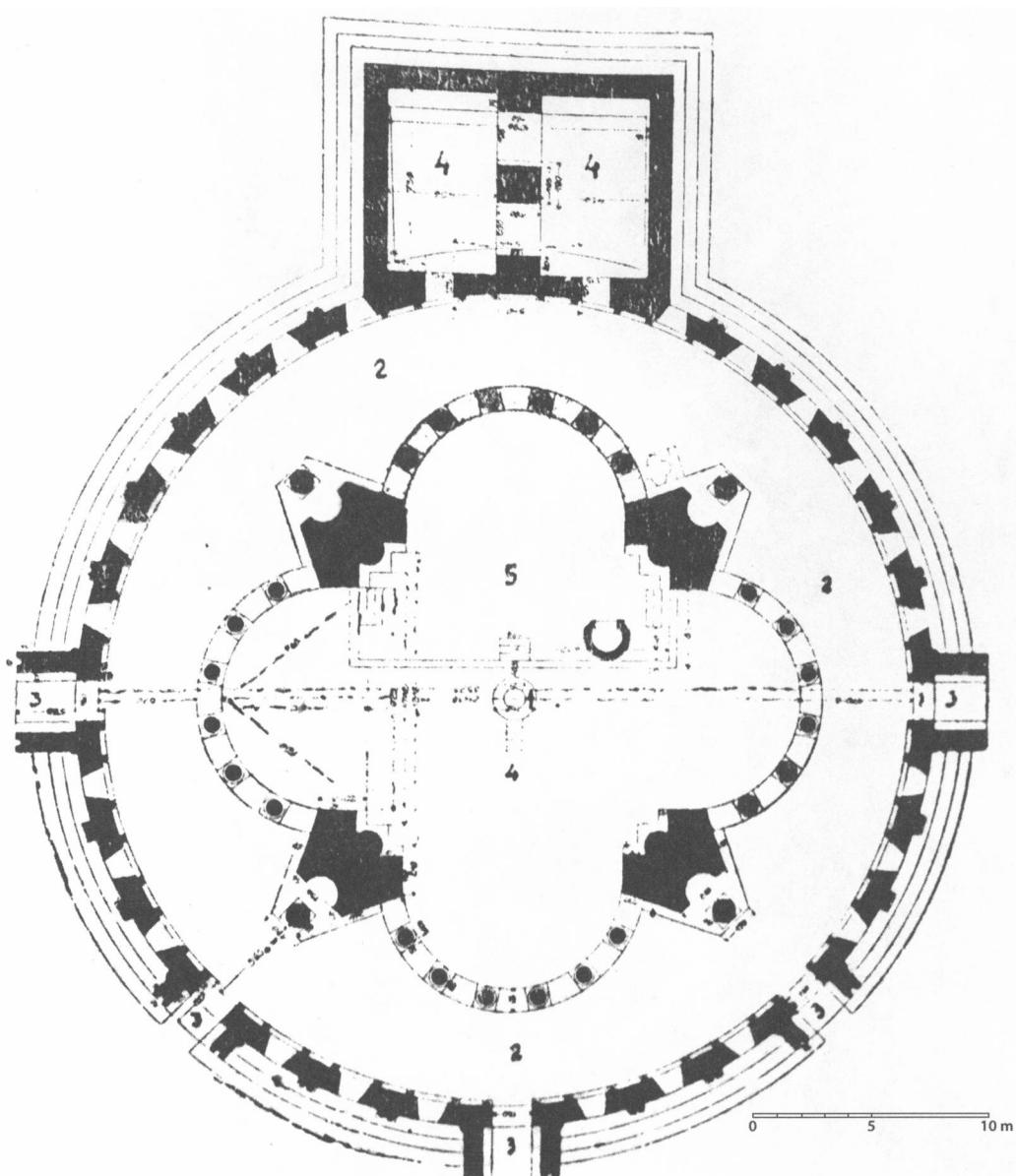


FIG. 12. T'oramanyan's 1905 plan of Zuart'noc' showing an eastern exedra (T. T'oramanyan, *Nyut'er Haykakan Čartarapetut'ean*, 1:247, fig. 157)

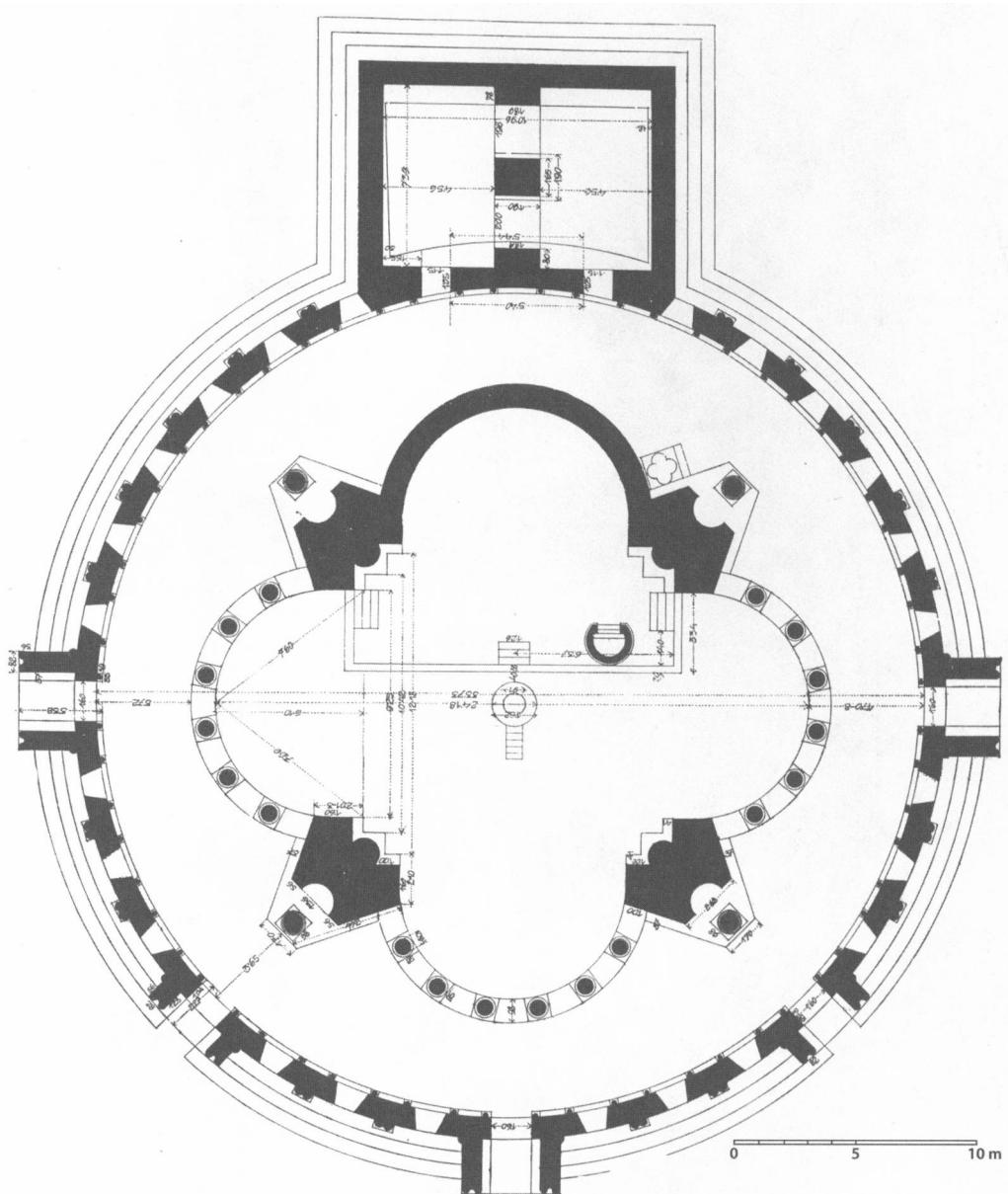
tetraconch appears not as a solid curved wall, but as a fourth exedra. Like the other three, it is composed of six columns, yet they are of much larger diameter. This was not a misprint: a close reader will have noticed that in the schematic plan (which appeared on the very next page of the essay) the eastern apse is also depicted as a fourth exedra (see fig. 8). Unfortunately, no explanation for the eastern exedra is offered. Further, in a later reprint of the

same essay in *Zuart'noc'-Gagkašen*, the eastern curvature has been inked in to form a solid wall.⁶⁴

The same dichotomy of solid and exedral walls is also represented in two surviving cross sections of Zuart'noc' by T'oramanyan. An east-west section published in the monographs of Marut'yan and

⁶⁴ Idem, *Zuart'noc'-Gagkašen* (n. 31 above), 27.

FIG. 13.
T'oramanyan's
plan of Zuart'noc'
published in 1918
(J. Strzygowski,
*Die Baukunst der
Armenier und
Europa* [Vienna,
1918], 115, fig. 112).



Mnac'akanyan shows only the lower two tiers of the church (fig. 14). Its truncated state is due, allegedly, to Xač'ik Dadyan's destructive impulses; according to some accounts, Dadyan was so enraged by T'oramanyan's conception of a three-tiered church that he cut off the dome and drum with scissors.⁶⁵ Above

the ambulatory is a barrel-vaulted gallery, corresponding to the level of the oculi. This gallery encircles the church, and is screened by a second level of exedrae

⁶⁵ T. Marut'yan, *Zvart'noc' ev zvart'noc'atip tačarner* (n. 1 above), 15 and pl. 2; Mnac'akanyan, *Zvart'noc' ev nuynatip hušarjanner*, 65 and pl. 19 (upper). The reproduction of the same image in

Mnac'akanyan's monograph, as in *Zvart'noc'-Gagkašen* (pl. 6), shows empty space above the uppermost course of the drum. Moreover, the upper edge of the drum is rendered with uneven courses of stone, as if in a ruined state, an effect also used in T'oramanyan's section of Ani Cathedral (*Nyut'er Haykakan Čartarapetut'eān*, 1:342). Did multiple copies of this drawing exist? Was the drawing repaired, somehow, after Dadyan damaged it?

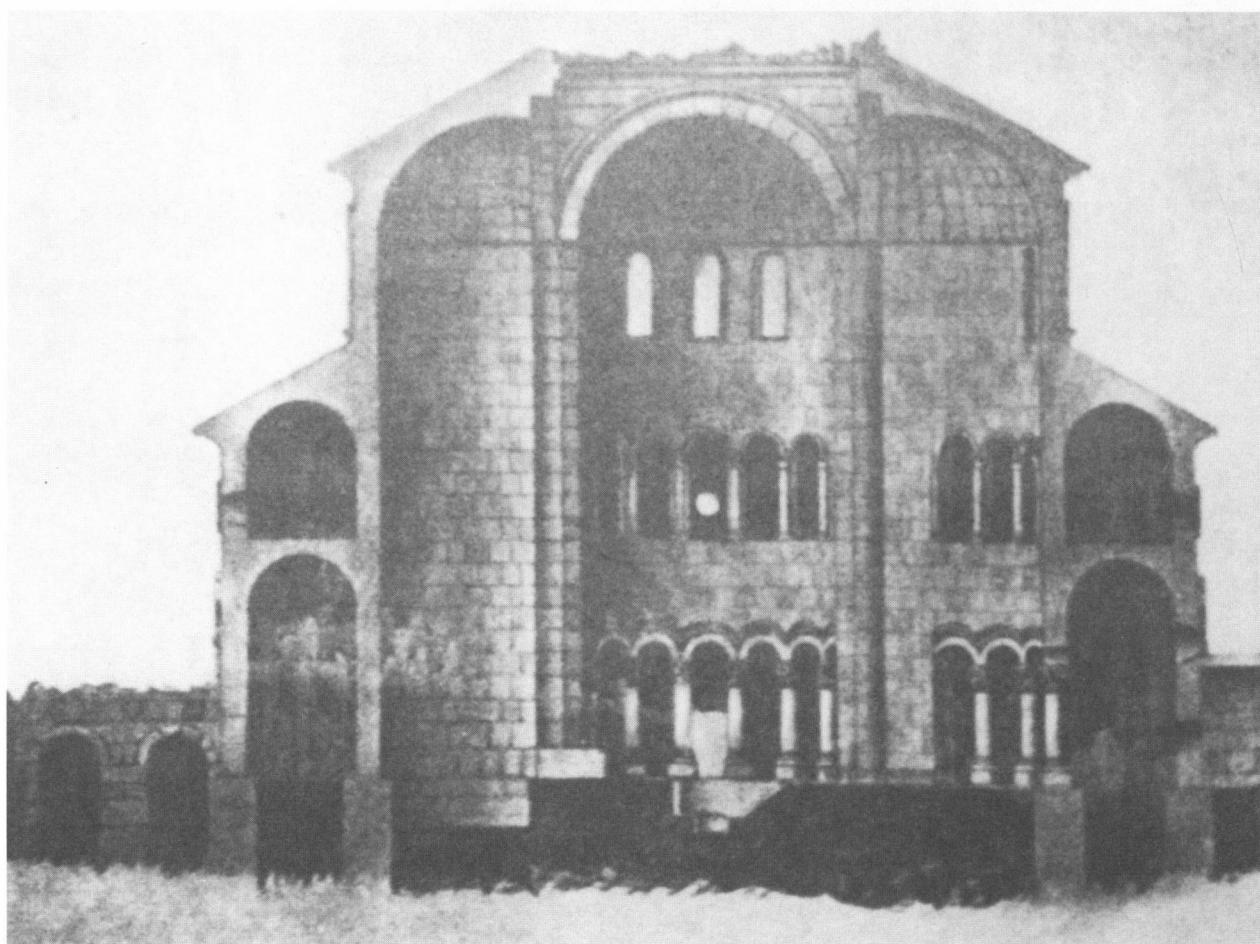


FIG. 14. Truncated east-west section of Zuart'noc' by T'oramanyan showing a solid eastern apse (T. T'oramanyan, *Zvart'noc'-Gagkašen* [Erevan, 1984], fig. 6)

consisting of arcades with attached columns and offering views of the nave, except in the east, where the wall is blind. Above, in the zone corresponding to the second exterior tier of the church, a series of large, arched windows illuminate the central space. Four great arches rise above, forming pendentives. Scrutiny of the area of the western portal suggests that oculi appeared above the porch roofs.

Another section, published in the second volume of T'oramanyan's *Nyut'er Haykakan Čartarapetut'ean*, shows the same view—an east-west section, this time with the drum and dome (fig. 15).⁶⁶ Much is the same, and the proportions of the building are close (the southern great arch is somewhat shallower in the second

66 T'oramanyan, *Nyut'er Haykakan Čartarapetut'ean*, 2:79.

section). The building appears light-filled—both the large arched windows of the first tier and the row of oculi on the second seem to illuminate the interior. Yet there is a striking difference: while the eastern apse is shown to be solid in the first section, in the second it is an exedra, elevated above the main floor of the nave and consisting of stocky columns, as indicated in the *Murč* essay.

When did T'oramanyan conceive of an eastern exedra for the church? The 1905 date of the *Murč* essay suggests that T'oramanyan decided on the exedra while still working at the excavation site and that he viewed it as a correction of Tēr-Movsisean's plan. Yet it seems that T'oramanyan changed his mind sometime before the 1907 publication of the plan in *Azgagrakan Handēs*, because the plan represented there, as in

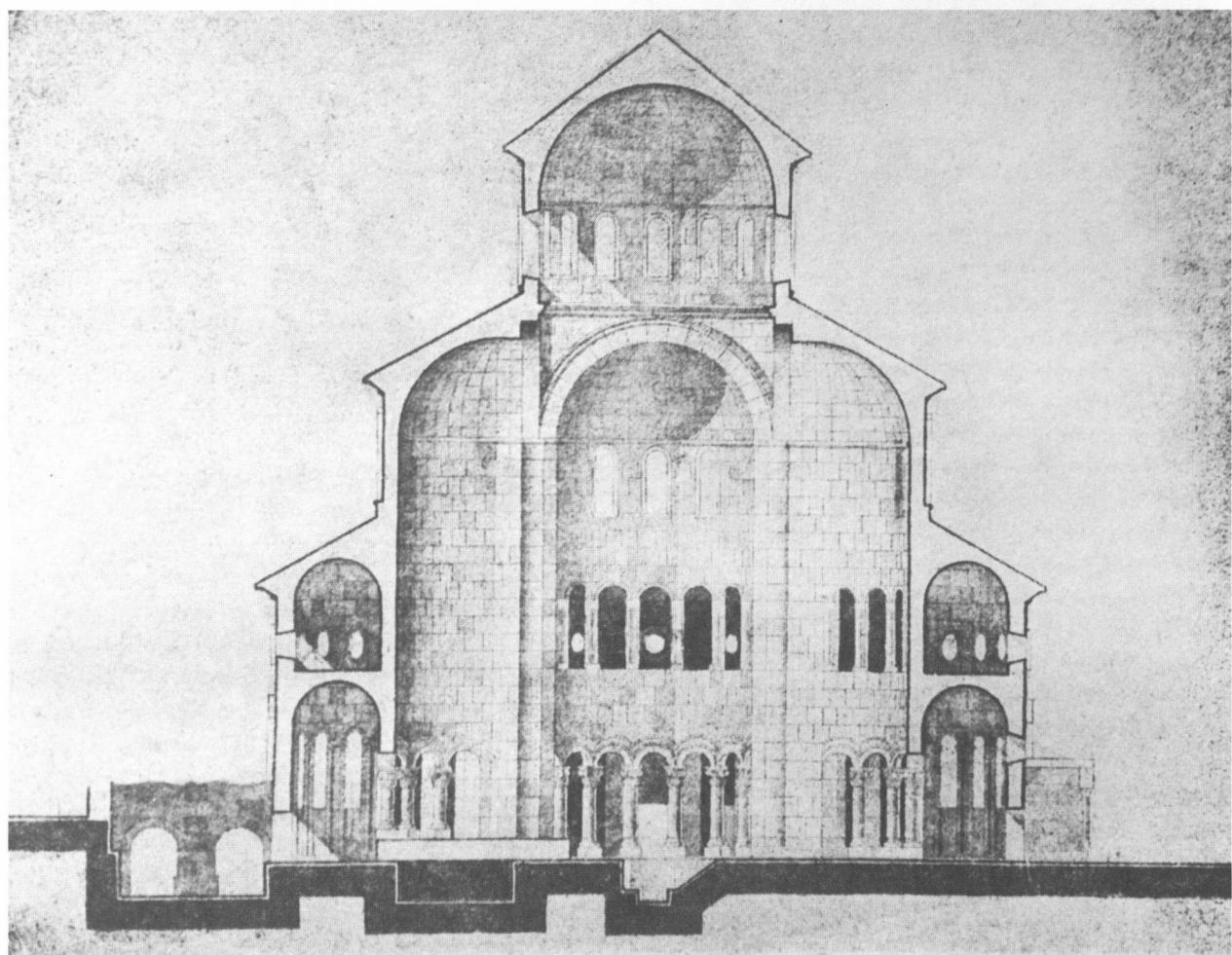


FIG. 15. Complete east-west section of Zuart'noc by T'oramanyan showing an eastern exedra (T. T'oramanyan, *Nyut'er Haykakan Čartarapetut'ean*, 2:79, fig. 32)

Strzygowski's *Die Baukunst*, bears a solid apsidal wall to the east. Noting that T'oramanyan does not mention an eastern columnar exedra in writings from 1905–18, Step'an Mnac'akanyan claims that "we have no basis to assume that he changed his mind [back]."⁶⁷ Thus the eastern exedra form may represent an early notion that T'oramanyan subsequently abandoned.

What motivated T'oramanyan's initial conception? This is a more difficult question to answer. Photographs from the excavation show that about one meter of the wall of the eastern apse was preserved. As the cross-section shows, this was construed as a parapet-like base for the columns. The damaged and sparse

nature of the archaeological evidence, particularly prior to the 1905 publication date of the essay, means that the interpretation was most likely supported by comparative monuments. It seems that the most obvious model for the eastern exedra at Zuart'noc was the Church of Gagik, or Gagkašen, at Ani. Excavations at the church, directed by Nikolai Marr, revealed a building strikingly similar in plan to Zuart'noc, except that the church had four open exedrae (fig. 16). Attested as an imitation of Zuart'noc by tenth-century texts, the church provided a crucial source of evidence in the reconstruction. Further, T'oramanyan knew this building well; he worked for Marr at Ani in the summer of 1905, and produced reconstructions of and publications on that building. There is, however, one problem:

⁶⁷ Mnac'akanyan, *Zvart'noc'a ev nuynatip hušarjanner*, 64.

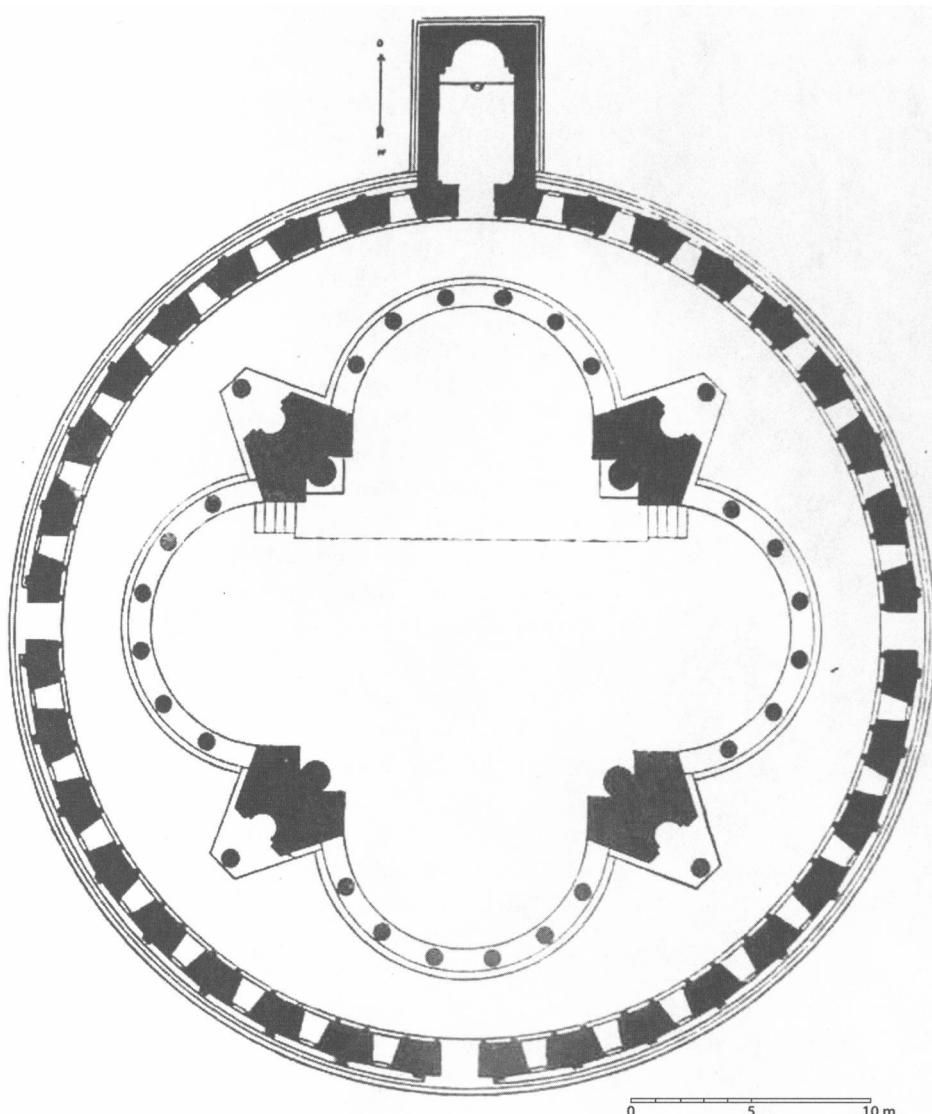


FIG. 16.
T'oramanyan's plan of
the Church of Gagik
(Gagkašen) at Ani
(T. T'oramanyan,
Zwart'noc'-Gagkašen
[Erevan, 1984], fig. 23)

Gagkašen was not excavated until 1905–6, well after T'oramanyan's first plan of Zuart'noc' was prepared for Murč.⁶⁸ It therefore seems likely that his knowledge of other aisled tetraconchs with eastern exedrae informed his reconstruction. While the churches of this type at Bosra in Syria, Aleppo, and Seleucia-Pieria had not yet been excavated in the first years of the

68 Also, knowledge of the plan of Gagkašen does not explain the enlarged diameter of the columns in the eastern exedra of his Murč plan. At Gagkašen, all the exedrae columns are of uniform thickness (see T'oramanyan, *Zwart'noc'-Gagkašen*, 114, fig. 23).

twentieth century, T'oramanyan was aware of at least three. Among his handwritten notes on Zuart'noc' is a plan of the Church of San Lorenzo in Milan—the celebrated, fifth-century, aisled tetraconch that also features an eastern exedra.⁶⁹ Two structures in the Caucasus could also have provided inspiration for his reconstruction: the churches of Bana and Išxan, both located in the region of Tayk'/Tao-Klarjeti. The church of Išxan is a domed basilica with an open eastern exedra consisting of stocky columns rising from a high base

69 Ibid., 109, fig. 17.

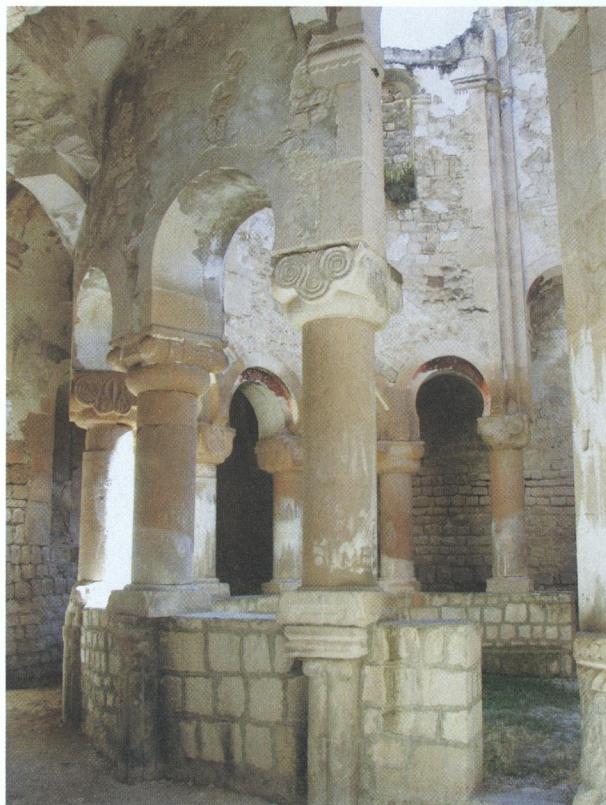


FIG. 17. View of the eastern exedra of the church of Išxan in Tao-Klarjeti (photo: author)

(fig. 17). This exedra had long been considered part of an earlier aisled tetraconch, and in 1905 Nikolai Marr associated the church with the patronage of Nersēs III, although this thesis has been subsequently questioned.⁷⁰

⁷⁰ N. Marr, *O raskopkakh i rabotakh v Ani: lietom 1906 goda: Predvaritelnyi otchet, Teksty i razyskaniia po armiano-gruzinskoi filologii 10* (Saint Petersburg, 1907), 2. A passage from this text is quoted in German in Strzygowski, *Die Baukunst*, 487. While Marr suggested that the aisled tetraconch plan was a product of Chalcedonian and Byzantine influences, Strzygowski argued that it represented an Armenian invention that probably originated in the third to fifth centuries, and which spread westward to inform Justinianic building. Marr's emphasis on Mediterranean precedents for the Transcaucasian tetraconch was, not surprisingly, abhorrent to Strzygowski, who writes that Marr "an Rivoira einen radikale Partner findet" (487). This was quite a gauntlet to throw down, as Giovanni Rivoira was an arch-rival of Strzygowski in the "Orient oder Rom" debates of the early twentieth century. For further discussion of the church of Išxan and its problematic dating, see most recently the dissertation of Markus Bogisch, "The Appropriation of

The church of Bana, dated between 882 and 923, also has an aisled tetraconch form, which once featured an eastern exedra and was well known to T'oramanyan, as his writings indicate.⁷¹ Here, as in other cases, a chronology of T'oramanyan's position is difficult to establish, but one may propose the following: T'oramanyan initially conceived of an eastern exedra, a decision informed by knowledge of existing aisled tetraconchs of the same layout and later supported by the excavations at Gagkašen. At a later date, however, he changed his mind. This change of position is suggested by the fact that a solid exedral wall occurs more often than not in his representations of Zuart'noc'. It is noteworthy that no scholar, to my knowledge, has attempted to revive the theory of an open eastern exedra at Zuart'noc'. The lack of substantial archaeological evidence at the site, and the presence of comparative monuments with open eastern exedrae, seems to invite further consideration of the problem.

T'oramanyan's elevation drawings also show changes over time. For example, two drawings of the façade are preserved. The first, described previously, presents all three tiers of the church and their decorative details (see fig. 11). The second façade drawing shows only the first two tiers of the church (fig. 18). One must wonder whether this drawing might also have suffered at the hands of Dadyan, as the drawing does not have a top margin, but continues until it is cut off by the edge of the paper. Neither façade drawing can be dated with precision. The complete version, however, was published in Strzygowski's *Die Baukunst*; the other "truncated" version was found among T'oramanyan's notes and published posthumously.⁷² Following Mnac'akanyan, it seems probable

Imperial Splendour: Ecclesiastical Architecture and Monumental Sculpture in Medieval Tao-Klarjeti around 1000 AD," PhD diss. (University of Copenhagen, 2009).

⁷¹ See, for example, *Nyut'er Haykakan Čartarapetut'ean* (n. 31 above), 1:277–81. Of all the aisled tetraconchs, Bana was probably best known to T'oramanyan, whose plan of the church appears in Strzygowski, *Die Baukunst*, 120, fig. 122. It had also been published previously in the nineteenth century by Karl H. E. Koch in his *Wanderungen im Oriente, während der Jahre 1843 und 1844*, 2 vols. (Weimar, 1846), 2:43–46, with a sketch plan at 2:44. The question of the relation between the reconstructions of T'oramanyan and those of Bana by the Russian architect Anatoly Kalgin is fascinating but not explored here. I thank Markus Bogisch for bringing the issue to my attention.

⁷² T'oramanyan, *Zwart'noc'-Gagkašen*, 101, fig. 5.

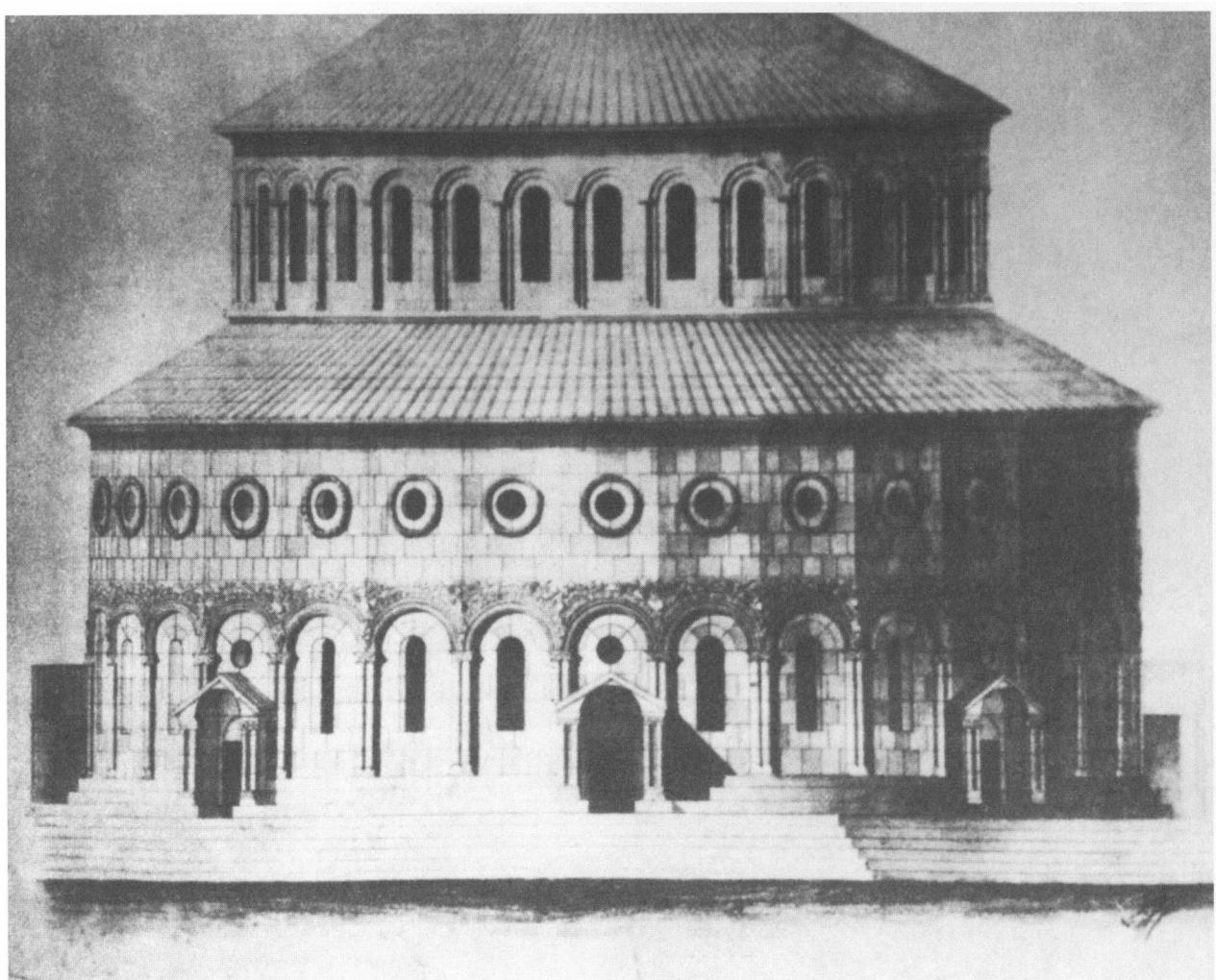


FIG. 18. Truncated reconstruction of the façade of Zuart'noc' by T'oramanyan (T. T'oramanyan, *Zwart'noc'-Gagkašen* [Erevan, 1984], fig. 5)

that both were produced before 1907, because they do not depict the distinctive western portal colonnettes, with their cushion capitals and bases, which were excavated that year.⁷³

Comparing their lower two tiers, the drawings are similar. Both show the same arrangement of blind arcades enclosing arched windows and surmounted with sculpted spandrels. Yet the proportions of the first tier differ: in the completely preserved rendering, each

facet seems elongated, achieved by a higher springing of the blind arcade, a shortening of the sculpted spandrel, smaller oculi, and, most significantly, by the higher placement and diminution of the arched windows of the first tier. In addition to these changes in proportion, the composition of the portals has changed. While the truncated version depicts the gable of each portal surmounted by an oculus, the complete version shows the portal surmounted by one of the large, arched windows of the first tier; that is, this register of windows is so high that it clears the gable of the portal.

What explains these changes? The question is difficult to answer, but one may guess that the excavations at Gagkašen again played a role. During the campaign

⁷³ The errors of T'oramanyan's early portal designs, as shown in figs. 11 and 18, were first noted by Dadyan, who excavated the colonnettes in 1906. X. Dadyan, "Hnagitakan Petumner 1907" (n. 23 above), 170–71.



FIG. 19. Model of the Church of Gagik at Ani, drawing by S. N. Poltoratsky (T. Marut'yan, *Zuart'noc' ev zuart'noc'atip tačarner* [Erevan, 1963], pl. 21)

of 1905–6, a stone model of the church, now lost, was discovered in the ruins.⁷⁴ The findings confirmed

⁷⁴ The fate of this model is as mysterious and tragic as that which befell other important finds from Ani. It was lost soon after its excavation. In recent years, however, a fragment of a statue of King Gagik, which is believed to have shown the king holding the model, has drawn the attention of scholars. The statue fragment has been on display at the museum of Erzurum since the 1980s, and is thought to have been on the museum records since the “post World War II period,” according to Giorgi Kavtaradze; see G. L. Kavtaradze, “The

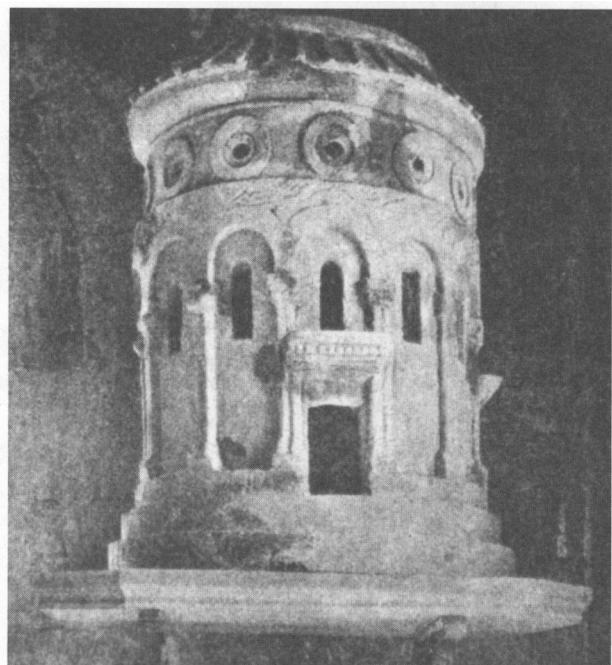


FIG. 20. Model of the Church of Gagik at Ani Gagkašen, archival photo (J. Strzygowski, *Die Baukunst der Armenier und Europa* [Vienna, 1918], 55, fig. 72)

that it once formed part of a donor portrait of King Gagik, and depicted a church with three cylindrical tiers (as rendered in a drawing by Simeon Nikolayevich Poltoratsky) (fig. 19). An archival photograph of the first tier is preserved, and shows arcades surrounding arched windows and a large west portal with a straight architrave appearing directly under one of the arched windows (fig. 20). That is, the relationship between the first register of fenestration and the portal is the same in the stone model and the drawing. This suggests that the complete drawing published in *Die Baukunst* postdates the truncated version, and also postdates the excavations at Ani. On this basis, one may suggest that T'oramanyan's most celebrated drawing of Zuart'noc' was produced between 1905 and 1907: after the discovery of the stone model at Ani, but before the discovery of the portal stones at Zuart'noc'.

T'oramanyan produced yet a third rendering of the exterior: a very large wooden model of the church that is now lost, but is thought to have been created in

Problem of the Identification of the Mysterious Statue from the Erzurum Museum,” *Caucasica* 3 (1999): 59–66.

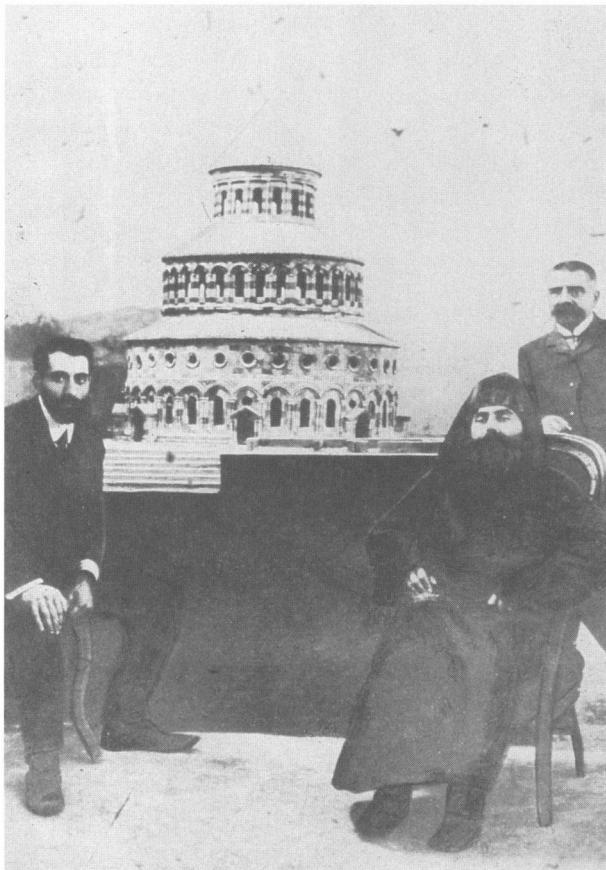


FIG. 21. Wooden model of Zuart'noc' by T'oramanyan (standing in rear), with Xač'ik Dadyan (seated, right) and Nikolai Marr (seated, left) (photo: T'oramanyan archives)

1910 (fig. 21).⁷⁵ It has strong similarities with the façade drawings, yet there are two salient differences. First, the drum of the third tier is crowned by a straight cornice, rather than by arcades. Second, the windows above the doorways are not oculi, but, as in the stone model, shortened arched windows. Mnac'akanyan noted in his monograph an additional difference: the wooden model's western portal bears the cushion capitals and bases on its colonnettes, reflecting the discovery of these elements in 1907.⁷⁶ It is noteworthy that this portal design, and not those of earlier renderings, appears in the majority of mass-produced models of Zuart'noc' available for purchase today as souvenirs.

75 T'oramanyan, *Zvart'noc'-Gagkašen*, 100, fig. 4.

76 Mnac'akanyan, *Zvart'noc'ə ev nuynatip hušarjanner* (n. 5 above), 63.

If the visual representations of Zuart'noc' by T'oramanyan suggest a process of experimentation and discovery, then so does his written work. He was most tentative about the interior construction of the superstructure, and particularly the question of dome support. Also instructive, in this respect, are his thoughts regarding a second-level gallery. In his reconstruction, as we have discussed, he implied the existence of this element; yet T'oramanyan expressed uncertainty regarding its means of access. In 1905, he considered the idea that stairs might have been found in the rectangular eastern chamber abutting the apse. Considering the substantial walls (over one meter thick) and attached piers, he proposed that this room was two-storied and offered access to the gallery. Yet here, as T'oramanyan admits himself, there was a problem: no traces of a stone stairway survived, and the idea of wooden ladders seemed unfitting:

It is unsuitable to think that the upper rooms were reached by means of transportable wooden ladders. First, given the height of the structure, the lightest wooden ladder would be no easy matter for even three men to lift, and second, we should not forget the architect of this grand building, of such amazing genius, who produced every element with incomparable grace; could he really have resorted to such an ordinary and vulgar method as a movable ladder?⁷⁷

T'oramanyan does not reach a definitive conclusion on the subject. While he felt certain of a gallery level, suggested by both the layout of the first-level supports and also by the wall thicknesses of the eastern chamber, precisely how such a level would be accessed remained unclear.⁷⁸ We shall see that Tiran Maruty'an, in his defense of T'oramanyan's reconstructions, devised a solution to this problem.

T'oramanyan's studies of Zuart'noc' make clear that even the most basic elements of Zuart'noc' were initially subject to question. A comparison of the layout, proportions, and elevation of the church in his various representations shows considerable variation,

77 T'oramanyan, "The Church of Zvart'noc'" (n. 57 above); reprinted in idem, *Zvart'noc'-Gagkašen*, 30.

78 For further discussion see T'oramanyan, *Nyut'er Haykakan Čartarapetut'ean*, 2:88 (idem, *Zvart'noc'-Gagkašen*, 36).

surely informed, in part, by contemporary archaeological discoveries. The multiple and diverse natures of his representations is unsurprising in light of the damaged condition of the excavation site, the unusual character of the remains themselves, and the heated debates surrounding Zuart'noc'. Nor is the case of Zuart'noc' without historical parallel: the reconstruction drawings of Frederick Woodbridge from excavations at Pisidian Antioch reflect the continual rethinking of ancient monuments as new materials were unearthed.⁷⁹ A future project might historicize more precisely this rich corpus, particularly in light of T'oramanyan's written texts and contemporary activities at Ani. At present, however, one may be certain of the danger of attributing to T'oramanyan a single, definitive vision of Zuart'noc'.⁸⁰

Contemporary Reactions

T'oramanyan's proposal of a cylindrical second tier was met with skepticism and even outright hostility.⁸¹ We have already mentioned the supposedly violent reaction of Dadyan to T'oramanyan's reconstruction sketch. The architect K'rastap'or Tēr-Sargsyan was also a vociferous critic, but he is known only through writings of and correspondence between Tēr-Movsisean and T'oramanyan. As T'oramanyan relates in a letter of 1909, he was asked to explain his reconstruction to Tēr-Sargsyan, who was brought to Ējmiacin for that purpose. T'oramanyan was told, "Sir . . . as science this thing is unacceptable, impossible."⁸² This

conversation was quickly followed by a meeting at the excavation site. T'oramanyan claims that upon seeing the material evidence, Tēr-Sargsyan retracted his position and "even asked [T'oramanyan] to show him, like an old friend, all the building fragments."⁸³ Yet, as T'oramanyan himself admits, Tēr-Sargsyan remained dubious of a cylindrical tier carried on the columnar exedrae.⁸⁴

Josef Strzygowski was less critical of, but also less interested in, technical aspects of T'oramanyan's theories of Zuart'noc'. They visited the site together in 1913 in preparation for publishing *Die Baukunst*, and the results of this trip are recorded in Strzygowski's journal entries, which are included in the volume. On 19 September, they visited the excavations together, which, Strzygowski points out, were undertaken "upon my suggestion of 1889."⁸⁵ Otherwise, Strzygowski writes very little of this day. The following day, he reported, his colleagues stayed at the ruins to verify the accuracy of T'oramanyan's records while he spent time at Ējmiacin working in the library and visiting the patriarch Gevork V (Surēnian).⁸⁶

T'oramanyan's reconstruction of Zuart'noc' made its debut in *Die Baukunst* with almost no critical commentary. The monument is discussed at numerous points within the volume, yet Strzygowski focused largely on its Greek epigraphy, liturgical furnishings, and program of capital sculpture. Regarding T'oramanyan's reconstruction, Strzygowski seemed only to question the gallery level above the ambulatory, which he considered "debatable" and more

79 A. Ossi, "Architectural Reconstruction Drawings of Pisidian Antioch by Frederick J. Woodbridge," *Bulletin of the University of Michigan Museums of Art and Archaeology* 16 (2005): 5–28.

80 Of all the recent scholars to address Zuart'noc', Step'an Mnac'akanyan provides the most thorough assessment of the diversity of T'oramanyan's oeuvre. In his monograph, he seeks to identify and visualize T'oramanyan's various conceptions of the monument and place them within a chronological development. See Mnac'akanyan, *Zwart'noc' ev nuynatip hušarjanner*, 58–80, and especially 61–64.

81 Tiran Marut'yan devotes an entire chapter to the initial reactions to T'oramanyan's work. The details of his account, however, are difficult to check, as he provides no footnotes. See Marut'yan, *Zwart'noc' ev zwart'noc'atip tačarner* (n. 1 above), 15–20.

82 The correspondence of T'oramanyan was collected and published by his granddaughter in a very useful volume that remains virtually unknown outside of Armenian-speaking circles. Yet it contains fascinating letters between T'oramanyan and correspondents such as linguist Antoine Meillet (1866–1936) and art historians

Henri Focillon (1881–1943) and Jurgis Baltrusaitis (1873–1944), to name only those who wrote in Western languages. The translation of this correspondence would surely shed new light on early twentieth-century historiography of medieval art and architecture. *T'oros T'oramanyan: Namakner*, ed. N. T'oramanyan (Erevan, 1968), 123.

83 Ibid., 123–24.

84 For T'oramanyan's account of his conversations with Tēr-Sargsyan, see ibid., 124 and also T'oramanyan, *Nyut'er Haykakan Čartarapetut'ean* (n. 31 above), 2:283–88. The debates are also mentioned by Tēr-Movsisean in *Azgagrakan Handēs* 16, no. 2 (1907): 141–42 (n. 21 above). It seems from these writings that Tēr-Sargsyan envisioned the main piers directly carrying the weight of the dome, without an intermediary tier.

85 "Wir unternehmen nachmittags den ersten Ausflug nach Zwarthnotz, das auf meine 1889 gegebene Anregung hin ausgegraben worden war. Welch großartiger Erfolg! Besichtigung des ausgedehnten Trümmerfeldes." Strzygowski, *Die Baukunst* (n. 51 above), 18.

86 Ibid.

characteristic of Byzantine church building, “as at San Vitale.” Subsequent scholars have also raised this question about T’oramanyan’s reconstruction of Zuart’noc’; in Strzygowski’s case, it is informed not by typological or structural issues, but rather by a preconceived taxonomy of architecture based on racial categories. A galleried Zuart’noc’ could not find a place within his *Gesamttheorie*, as it would suggest influence from the post-classical Mediterranean world:

That the building form [of Zuart’noc’] is not originally Hellenistic, Roman, or Byzantine has been sufficiently stressed here. Even if the columnar exedrae recall the churches of Justinian . . . we must still stress that the type is not derived from Constantinople; much more likely, rather, is that the national Armenian artistic tradition travelled to Antioch, Ravenna, and Constantinople.⁸⁷

This passage illustrates Strzygowski’s notoriously ahistorical view of early medieval architecture, favoring the “national Armenian tradition” over relative chronology. It was also surely aimed against the archaeologist Nikolai Marr, who had criticized Strzygowski’s theories of the indigenous origins of Zuart’noc’ and stressed instead its Byzantine character.⁸⁸ I will discuss the hypothetical reconstructions of T’oramanyan and others in relation to broader theories of Armenian architecture at the close of this essay. For the moment it is enough to note that by 1918, Zuart’noc’ had become an academic hobbyhorse, raising hackles from Ējmiacin to the excavation site, and from Saint Petersburg to Vienna.⁸⁹

87 Ibid., 489.

88 Ibid., 109, where Strzygowski cites N. Marr, *O raskopkakh i rabotakh v Ani* (n. 70 above).

89 According to Mnac’akanyan, T’oramanyan also did not convince the celebrated architect Gabriel Ter-Mikelov (1874–1949). Apparently, Ter-Mikelov also generated a reconstruction of Zuart’noc’, in which it appeared similar to the church of Abułamr at Ani, probably of the late tenth century. It is unpublished (see Mnac’akanyan, *Zvart’noc’ ev nuynatip hušarjanner* [n. 5 above], 75). Nikolai Tokarskii also raised questions about T’oramanyan’s work. In criticism of T’oramanyan’s vision of interior arcades on the second floor, Tokarski notes that only one capital from the excavations could possibly have come from such a level (contrary to the 18 proposed by T’oramanyan). This criticism carries less weight when one remembers the meager amount of available material evidence to support any vision of the superstructure. Tokarski’s own proposal

In 1951, Alexander Kuznetsov published one of the earliest comprehensive rebuttals of T’oramanyan’s reconstruction. Considering T’oramanyan’s sketches, he called attention to the structural weakness of the second round tier. In particular, he criticized T’oramanyan’s eight-arch support system, calculating that by T’oramanyan’s sketch, the eagle columns would have had to bear an impossible forty kilograms per square centimeter. Equally unsustainable, he felt, was the weight carried by the extension points of the exedrae and by the perimeter wall. The latter, measuring about 1.04 meters in thickness, would have collapsed under the outward thrust of the dome and vaults. Kuznetsov also noted problems in T’oramanyan’s fenestration designs. According to T’oramanyan’s reconstruction, the cylindrical second tier was pierced by thirty-two windows. Yet his proposed interior allows actually only twelve to bring light into the church, while twenty are occluded by the piers and (using the plan published in *Die Baukunst*) the apsidal curvature.

Kuznetsov illustrated these critiques in a drawing and an alternate reconstruction (fig. 22). In his version, a very low, round ambulatory envelops a tall tetraconchal second story, expressing the outline of the columnar exedrae within. The conches are affixed to a square base, above which rises a cylindrical drum and conical roof. This composition, as many have pointed out, has its own structural problems, for the great height of the dome and tetraconch core would not have received sufficient buttressing by the low ambulatory.⁹⁰ Mnac’akanyan also pointed out the difficulty of situating this vision of Zuart’noc’ within the context of Transcaucasian architecture. In the churches of this region, the perimeter wall typically defines the basic shape of the exterior mass, while in Kuznetsov’s drawing the quasi-rotunda rises only one quarter of the total elevation, appearing almost as a base for the tetraconch above.⁹¹ Yet this criticism itself raises another question:

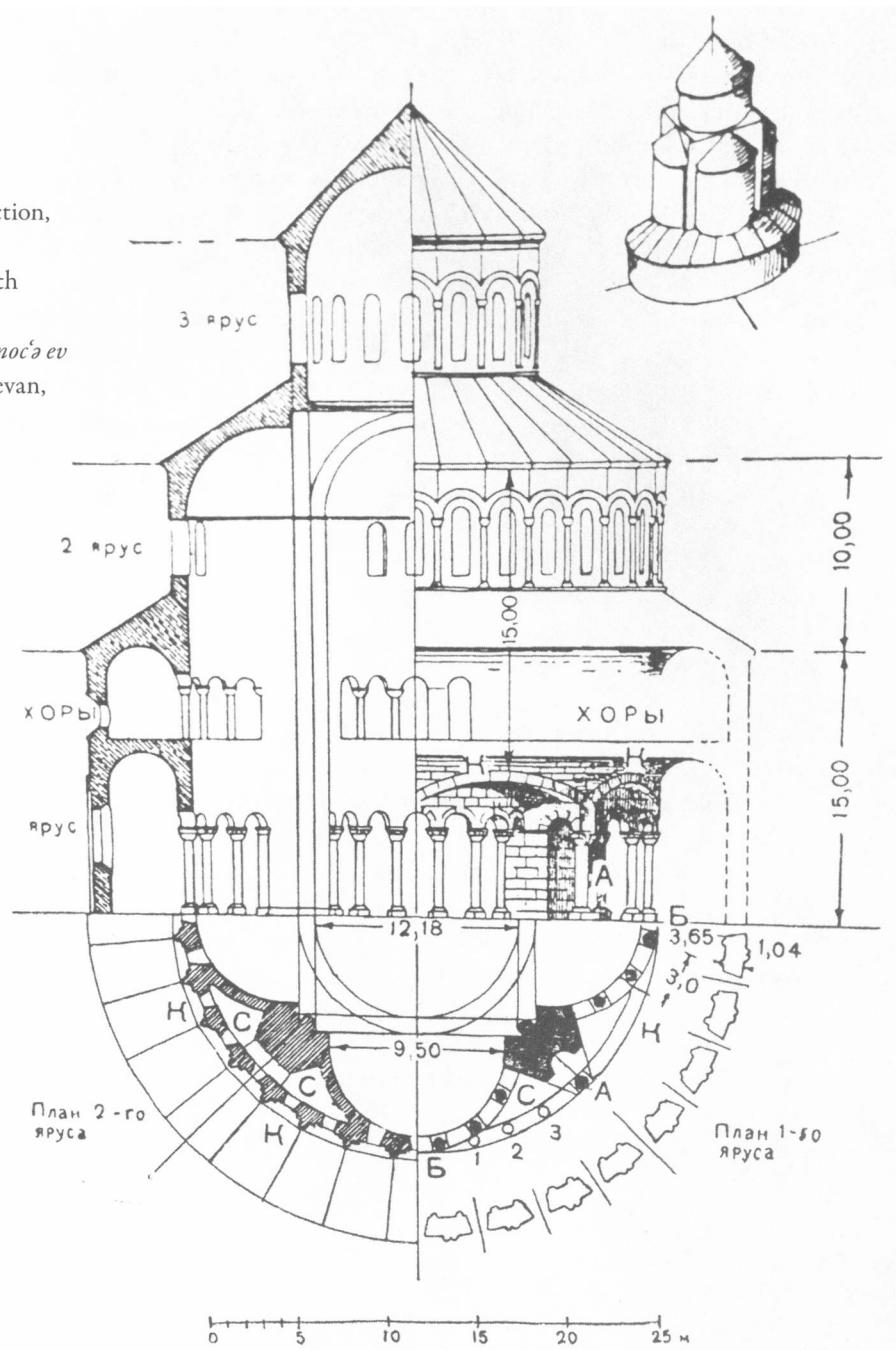
for Zuart’noc’ is based on observation of the church of Išxan in Tayk’/Tao-Klarjeti. See the discussion and critique of Tokarski in Mnac’akanyan, *Zvart’noc’ ev nuynatip hušarjanner*, 78. For further discussion of the church and its problematic dating, see Bogisch, “Appropriation of Imperial Splendour,” 179–206.

90 See, in particular, Mnac’akanyan, *Zvart’noc’ ev nuynatip hušarjanner*, 75–78.

91 As Mnac’akanyan observes, “it is not difficult to see that this composition is absolutely alien to Armenian architecture, because in Armenian architecture the first storey is always constructed as a

FIG. 22.

Structural analysis of T'oramanyan's reconstruction, along with an alternate reconstruction sketch, both by Alexander Kuznetsov (S. Mnac'akanyan, *Zvart'noc' ev nuynatip hušarjanner* [Erevan, 1971], 77, fig. 13)



to what degree should resemblance to local forms constitute a criterion for the reconstruction of *Zuart'noc'*, a building whose surviving fragments and patronage

fundamental element of the composition, and we cannot note a single building in which [it] has secondary significance" (*Zvart'noc' ev nuynatip hušarjanner*, 76).

show contact with traditions outside of the Caucasus? I will return to this question later.

A survey of early responses to T'oramanyan's reconstruction reveals the many doubts raised about its structural stability: the unprecedented and rather awkward solution of uniting the exedrae columns with the eagle columns, the weight of the second tier on these

single points of support, and the massive height of the structure seemed unsupportable. Mnac'akanyan later wrote that no such church could stand for three hundred years:

There is only one possible answer: Zuart'noc' remained upright not by miracle, but rather by the simple reason that its architectural structure . . . was much more stable than what T'oros T'oramanyan envisioned in his reconstruction design.⁹²

Problems with the Second Tier

The years between about 1959 and 1971 saw heated debate over the question of reconstruction. Step'an Mnac'akanyan and Tiran Marut'yan published a series of monographs and articles disputing the archaeological, structural, and historical evidence. Their arguments appear only in Armenian and Russian, and do not easily lend themselves to summary. Protracted and highly technical, they present data derived from the measure of fragments, and employ geometrical equations to hypothesize the larger proportions of the structure. Given the density of this literature, it is unsurprising that the positions of Mnac'akanyan and Marut'yan have typically been represented in a highly reduced manner, with little attention to the evidence and methodologies used. Yet their works deserve close scrutiny, particularly because the question of reconstruction, as they defined it, remains very much alive today.⁹³ The following pages seek to elucidate the key technical points made by both. While their scholarly positions are often summarized in the form of divergent reconstruction drawings, a reading of their underlying arguments reveals a much more complex and surprising picture.

In 1959, Mnac'akanyan published a comprehensive archaeological re-evaluation of Zuart'noc' and new proposals for its original appearance. His most famous reconstruction drawing was as finely detailed as any of T'oramanyan's, clearly delineating each masonry course and ceramic tile (fig. 23). The depicted church also shares some elements of previous reconstructions:

⁹² Ibid., 78.

⁹³ Mnac'akanyan, *Zvart'noc'a ev nuynatip bušarjanner* and T. Marut'yan, *Zvart'noc' ev zvart'noc'atip tačarner* (n. 1 above).

it rises in three tiers, the first of which is composed of blind arcades framing windows with an upper register of oculi. As in T'oramanyan's truncated version of Zuart'noc' (see fig. 18), the arched windows of the first tier reach down only to the lintel of the portals. Mnac'akanyan further shortened this tier, lessening the number of its stone courses, so that it measures 11.63 meters from the pavement to the roofline, roughly four meters shorter than T'oramanyan's first tier.

However, changes are most dramatic in the upper elevation. T'oramanyan's cylindrical second tier was rethought as four conches projecting from a square bay resting on a stepped, circular platform. Polygonal on the exterior and circular on the interior, each conch is pierced with five windows framed by blind arcades and roofed with tile. At the third tier, the square bay rises above the conches to form the base for a twelve-sided (rather than sixteen-sided) drum. The windows of the drum do not bear arcade moldings, as in T'oramanyan's reconstruction, but are flanked with narrow triangular niches. At the summit of the building is a hemispherical tile roof, rather than the faceted cone T'oramanyan proposed. A section view of the interior shows further changes.⁹⁴ First, Mnac'akanyan dispenses with the rectangular eastern chamber, which he believed had been added in the ninth century, possibly as a treasury. He also removes the gallery level in the ambulatory. The new, continuous space is lit both by the oculi and the lower set of arched windows. Finally, Mnac'akanyan clearly indicates squinches as the means of support for the dome, while T'oramanyan had tentatively favored pendentives.

Despite these substantial changes, it is striking to note that Mnac'akanyan retained T'oramanyan's central architectural concept: the eight-arch system uniting the exedrae and eagle columns. Unlike his predecessor, however, Mnac'akanyan offered a detailed explanation for how this scheme would work. In his reconstruction, the eagle columns are double the height of those in the exedrae (fig. 24).⁹⁵ Shallow arches lightened by a series of holes in the masonry spring from corbels suspended from the center of each exedra. These arches come to rest on the eagle capitals

⁹⁴ Ibid, 92, fig. 21.

⁹⁵ In the present reconstruction efforts at the site of Zuart'noc', the eagle columns have been erected according to Mnac'akanyan's proposal.

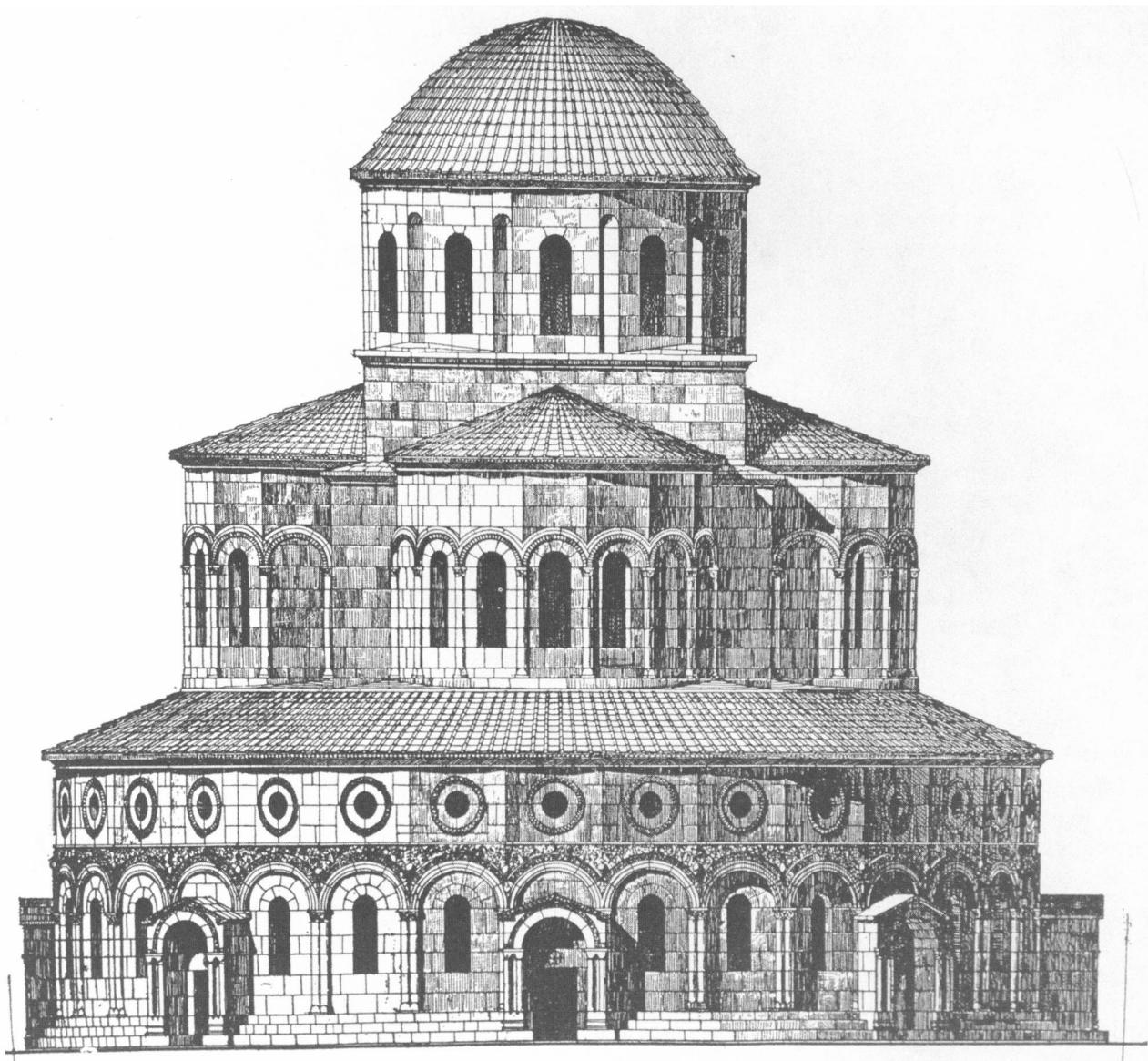


FIG. 23. Reconstruction of Zuart'noc' by Step'an Mnac'akanyan (S. Mnac'akanyan, *Zvart'noc' ev nuynatip hušarjanner* [Erevan, 1971], fig. 27)

in front of the piers. At this point, the arches are supported not only by the eagle columns but also by the piers behind them. The system is perhaps best put in experiential terms: if one were to stand in the ambulatory space, in the V-shaped hollow between the pier and the exedra, one would see a barrel vault of a roughly triangular plan.

As difficult as the structure is to describe, so must it have been to build and repair. A glance at Mnac'akanyan's scheme raises the same worries about stability as did T'oramanyan's. The suspended corbels, embedded in the curve of the upper wall of the exedrae, combined with the very tall eagle columns, would have provided weak and uneven support to the

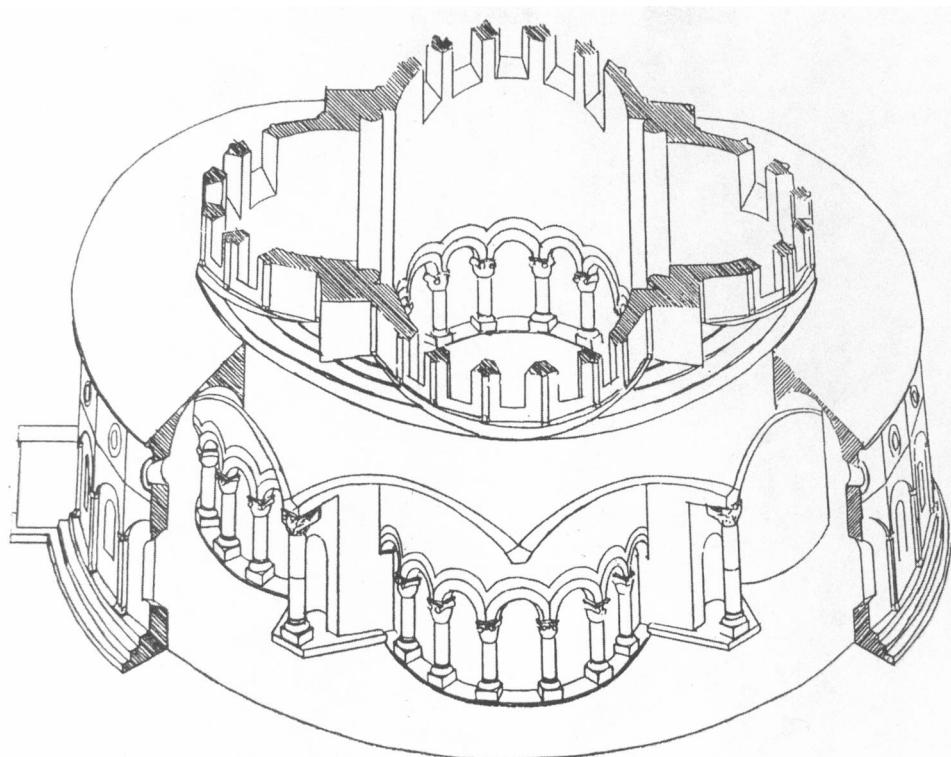


FIG. 24.
Mnac'akanyan's
rendering of the
ambulatory vault and
its inner supports
(S. Mnac'akanyan,
*Zvart'noc' ev nuynatip
hušarjanner* [Erevan,
1971], 88, fig. 19)

superstructure.⁹⁶ One can equally imagine the challenges of construction; the irregularity of the ambulatory vault must have demanded innovative methods of scaffolding. Yet Mnac'akanyan's modification of T'oramanyan's original scheme did solve three basic problems. First, it put less masonry weight on the eagle columns. Second, with the more limited fenestration of the conches, it eliminated the critiques raised against T'oramanyan's second-tier windows, of which twenty would not have delivered direct light. Third, Mnac'akanyan's design eliminated both the gallery and the oddly shaped chambers of the second level, which, as T'oramanyan readily admitted, had no evident means of access.

What is the material basis for Mnac'akanyan's reconstruction? There is no way to answer this question honestly without referring the reader directly to the source, for Mnac'akanyan undertook the most thorough archaeological examination of Zuart'noc' that

⁹⁶ Although suspended corbels are used in later architecture of the region. For example, in the rectangular bays of the mosque at Ani groin vaults are suspended on corbelled piers.

has yet been published. A reading of Mnac'akanyan's work makes clear that he carefully scrutinized hundreds of fragments at the excavation site. Indeed, enough remained of the first tier of the church that he was able to lay it out on the ground, the result of which is captured in a now-famous photograph (fig. 25). Regarding the upper floors, Mnac'akanyan shared the opinion of T'oramanyan that much less material evidence was identifiable.⁹⁷

⁹⁷ Mnac'akanyan elaborates:

During the time of excavations, fragments belonging to hundreds of different stones were revealed: parts of the wall and its continuous decoration were strewn around the site. It must be noted that much of what we have belongs to the first floor, while the materials of the second and third floor stones are less preserved. What remains: the arches of inner central tetraconch and the individual columns, the 'double-curved' [ambulatory vaults], the blind arcades of the exterior wall and their decoration, the oculi and their mouldings, and a few other stones. Of the second floor we have the engaged columns and the windows. Preserved from the third storey are the stones of the drum wall and cornice, stones of the squinches, the springing of the dome, and

FIG. 25.

Mnac'akanyan with fragments of the first tier of Zuart'noc' laid out on the ground (Mnac'akanyan, *Zwart'noc' ev nuynatip hušarjanner* [Erevan, 1971], pl. 24)



Yet one particular sequence of stones motivated Mnac'akanyan to hypothesize a tetraconchial second tier. These stones appear in Mnac'akanyan's published photographs standing upright on the ground (e.g., fig. 26). As they have been arranged, they form the top portion of one complete arch and the springing of an adjacent arch to the left. The inner ring of this arch is

decorative stones from the interior of the dome. (*Zwart'noc' ev nuynatip hušarjanner*, 51)

It goes without saying that Mnac'akanyan's inventory of the second- and third-floor materials remains speculative since we do not know the disposition of the superstructure.

composed of three large voussoirs, in which a small fragmentary stone has been inserted. Above these voussoirs are three more stones, arranged radially and decorated with a spoon-shaped motif that forms the continuous decorative window molding. To the left of the arch is a stone which roughly forms a V. It bears spoon-shaped decoration on both its left and right sides, suggesting the continuation of molding into the adjacent left-hand arch. The surface of this "angle stone" is not flat, but carved with a projecting vertical angle, as though it were intended as a joint between two different planes of a polygonal surface. By measuring from the midpoint of the leftmost angle stone to the rightmost,

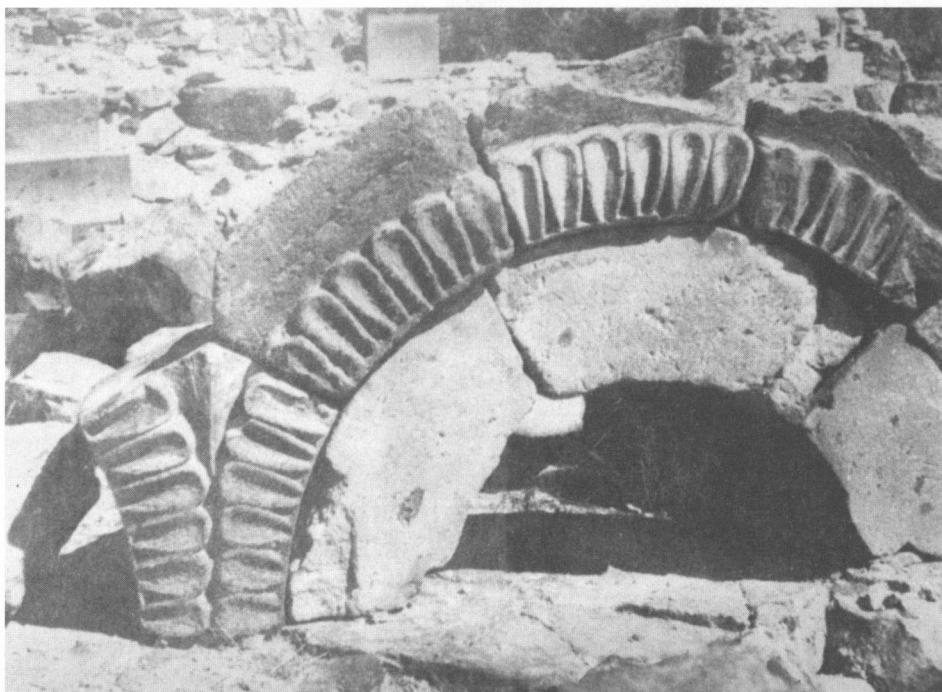


FIG. 26.
Window arch of second
tier conch, according
to Mnac'akanyan
(T. Marut'yan, *Zvart'noc'*
ev zvart'noc'atip tačarner
[Erevan, 1963], pl. 13)

Mnac'akanyan believed he had found one facet of the polygonal exterior of the second-tier conches.

Using this unit, Mnac'akanyan derived the total size of each conch, and thus the proportions of the second tier. To do so, he measured the distance between the angle stones at 245 centimeters, and their angle surfaces at 156 degrees.⁹⁸ This data suggested to Mnac'akanyan that the facet would be too small to create a circular tier; in order to do so, it would need a measure of at least 169 degrees. Further, his angle measure seemed to correspond to data gathered from examining the exedrae. Specifically, Mnac'akanyan found the same angle of 156 degrees when he measured the intercolumniation of the exedrae, taken from the midpoint of one column to the next. On this basis, he envisioned a second tier constructed along the same lines as the inner shell of the first floor.⁹⁹

98 The measurement of 245 cm is corrected in the monograph from an earlier publication by Mnac'akanyan, in which he provided 225 cm as the width between the angle stones. See S. Mnac'akanyan, "Zvart'noc'i verakazmut'yan nor naxagica," *Telkagir* no. 9 (1959): 70–71 and Marut'yan's response to this publication (Marut'yan, *Zvart'noc' ev zvart'noc'atip tačarner* [n. 1 above], 45).

99 The precondition of his hypothesis, which he fully admits, is that the degree measure of the angle stones indicates the angles of the facets of the second-story conches.

In 1963, Tiran Marut'yan launched a critical response. After a period of fieldwork at the site, he sought largely to support the reconstruction theories of T'oramanyan. Noting that T'oramanyan did not himself provide archaeological evidence for his reconstruction, Marut'yan offers photographs, drawings, and mathematical formulae in order to prove the thesis of a round second tier. Three basic observations of critical response should be noted. First, Marut'yan was selective in which of T'oramanyan's reconstructions he sought to defend. For example, he accepted as authoritative the complete version of the exterior published in *Die Baukunst*, which we have discussed above. Second, unlike Mnac'akanyan, Marut'yan argued that the rectangular eastern chamber was original to the church.¹⁰⁰

100 Marut'yan claimed, in contrast to Mnac'akanyan, that the square chamber and the quasi-rotunda were contemporaneous. This was in part based, he claimed, on observations made at the site. On 14 February 1961, workers were renovating the interior parts of the circular wall in order to "clean up" (*mak'rel*) the curved wall and the northeast corner of the rectangular chamber. At this time he noted that the mortar infill was the same color and form in both sections, and that the same correspondence was found between the curved wall and the southeast corner. To explain the divergent heights of the masonry courses in the two sections, evidence used by Mnac'akanyan to promote the thesis that the chamber was added later, Marut'yan suggested that the process of construction might

In his view, this chamber offered access to the second story. While T'oramanyan had not been conclusive on this matter, Marut'yan offered a detailed scheme for four wooden stairways, locating two between the central pier and attached piers of the east wall, and two more along the north and south walls (fig. 27).¹⁰¹ Additionally, he argued that four spiral stairs were set into the semi-circular niches behind the domical piers. Such a system, as many have noted, lacks support in the archaeology and in comparative monuments.¹⁰² More important for the present purpose is that

have necessitated this effect, because (in his view) the quasi-rotunda had to have been built as a unit before the construction of the eastern chamber. Additionally, Marut'yan found a mason's mark (a swastika) both on the second stone course of the eastern chamber and on the first stone course of the quasi-rotunda (about 40 cm from the north-east corner of the chamber) (*Zvart'noc' ev zvart'noc'atip tačarner* [n. 1 above], 37). Finally, Marut'yan notes the similar thicknesses of the walls (93 cm). What was the function of the chamber? Marut'yan saw it as a treasury (*kancaran*), based on a semicircular niche (of 63 cm diameter) he detected in the western face of the east wall (see *ibid.*, 28, fig. 4).

101 See *ibid.*, 32, fig. 5. Marut'yan believed he had located the evidence for these stairs in his observation of the inner surface of the foundations of the western wall (the outer surface of the east wall of the church), where he detected five notches (these are clearly illustrated in *ibid.*, 40, fig. 6 and pl. 7). They are incised into the wall in a sloped fashion, as would be appropriate, according to Marut'yan, for the wooden slope of a staircase. Unlike T'oramanyan, Marut'yan felt that not all wood was "improper" for use in a church. He claimed that there was a type of wood with a very long lifespan (he does not specify the type) and that "consequently perhaps the stairs prepared with its use were perhaps not judged as temporary" (*ibid.*, 39).

102 The unusual semicircular (rather than triangular) profile of the niches suggested to Marut'yan a spiral staircase. He claimed to have found analogous constructions elsewhere, although he does not, unfortunately, name any in particular. In his 1971 monograph, Mnac'akanyan took issue with Marut'yan's arguments of the contemporaneity of the rectangular chamber and the quasi-rotunda, as well with his proposal for wooden staircases. Mnac'akanyan suggested that the chamber may have been erected at the end of the ninth century, when the patriarchate moved back to Zuart'noc', and when there may have been a need for the safekeeping of church treasures (Mnac'akanyan, *Zvart'noc' ev nuynatip hušarjanner* [n. 5 above], 50). As for the "notches", Mnac'akanyan notes that these were not identified by T'oramanyan or any other scholars, and were not evident to him either. The possibility of stone stairs is equally dismissed by Mnac'akanyan, for such major elements of the construction would have surely left some trace, as, for example, at structures in the monasteries of Hałpat, Sanahin, and Noravank', where one may either discern the remains of the stairs or damage to the wall surface that indicates their prior existence (*ibid.*, 50–51).

Marut'yan's reconstruction of Zuart'noc' followed that of T'oramanyan's in its main lines, and even claimed to substantiate it by the inspection of material evidence.

What is this evidence? The reader may be surprised to learn that Marut'yan used the very same set of stones selected by Mnac'akanyan to demonstrate his theory of a tetrachonch. Marut'yan, however, focused on the left-hand angle stone of the arch, dismissing the internal voussoirs identified by Mnac'akanyan as "quite casually positioned side-by-side."¹⁰³ Thus he rejected Mnac'akanyan's measurement of 245 centimeters as the width of the facet, and used the inner curvature of the left-hand stone to determine the full arch. To demonstrate this, Marut'yan prepared a line drawing of the stone with its measurements (fig. 28). Given a chord length (L) and its maximum distance from the arc (u), the curvature of the circle is fixed and its radius (r) can be determined using the Pythagorean Theorem. Marut'yan measures (L) to be 54 centimeters and (u) to be 3.4 centimeters. Using the equation $r = ((L/2)^2 + u^2) / 2u$, Marut'yan calculates (r), the radius of the circular arc, to be 109 centimeters.¹⁰⁴ The width of the facet is then twice the radius plus twice the half-width of the cornerstone (109 × 2 + 2 × 19), totaling 256 centimeters.¹⁰⁵ One can see that this exceeded Mnac'akanyan's measurements for the same element by eleven centimeters.

Marut'yan also challenged Mnac'akanyan's positioning of the angle stones as an "adulteration of the real evidence."¹⁰⁶ The latter, it will be recalled, measured the angle of these stones at 156 degrees, and took this angle as an exponent for his tetrachonal reconstruction. Marut'yan also used the angle of the stone as an

103 Marut'yan, *Zvart'noc' ev zvart'noc'atip tačarner* (n. 1 above), 47.

104 Ibid. Marut'yan here uses a standard circular arch equation. I wish to thank my father, profusely, for his patient explanations of the geometrical and algebraic analysis used by both Marut'yan and Mnac'akanyan. I could not have completed this section without his assistance, which he offered in generous measure.

105 Marut'yan claimed that the measure of 256 cm comes very close to T'oramanyan's measure of the facet as 255 cm (*Zvart'noc' ev zvart'noc'atip tačarner*, 47). He does not, however, cite a particular written or graphic work of T'oramanyan in which this specific number appears. Is it based on Marut'yan's measure of T'oramanyan's plans or sections? If so, which ones? And if this is the case, how likely is it that the close correlation (one centimeter difference) between his measure of the facet, achieved through geometric analysis, and that of T'oramanyan is a happy accident?

106 Ibid.

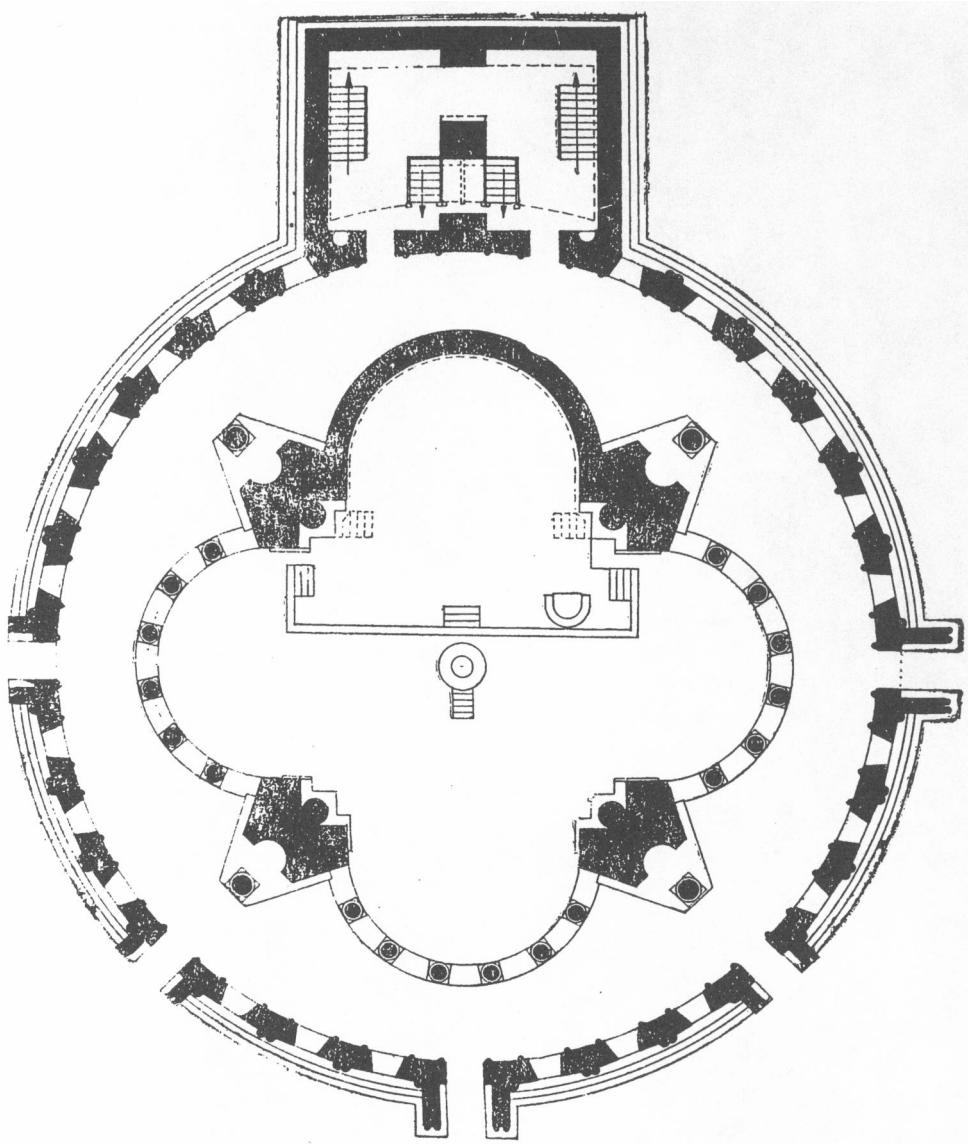


FIG. 27.
Plan of Zuart'noc' by
Marut'yan showing stairways
in the eastern chamber
(T. Marut'yan, *Zvart'noc' ev zvart'noc'atip tačarner*
[Erevan, 1963], 28, fig. 4)

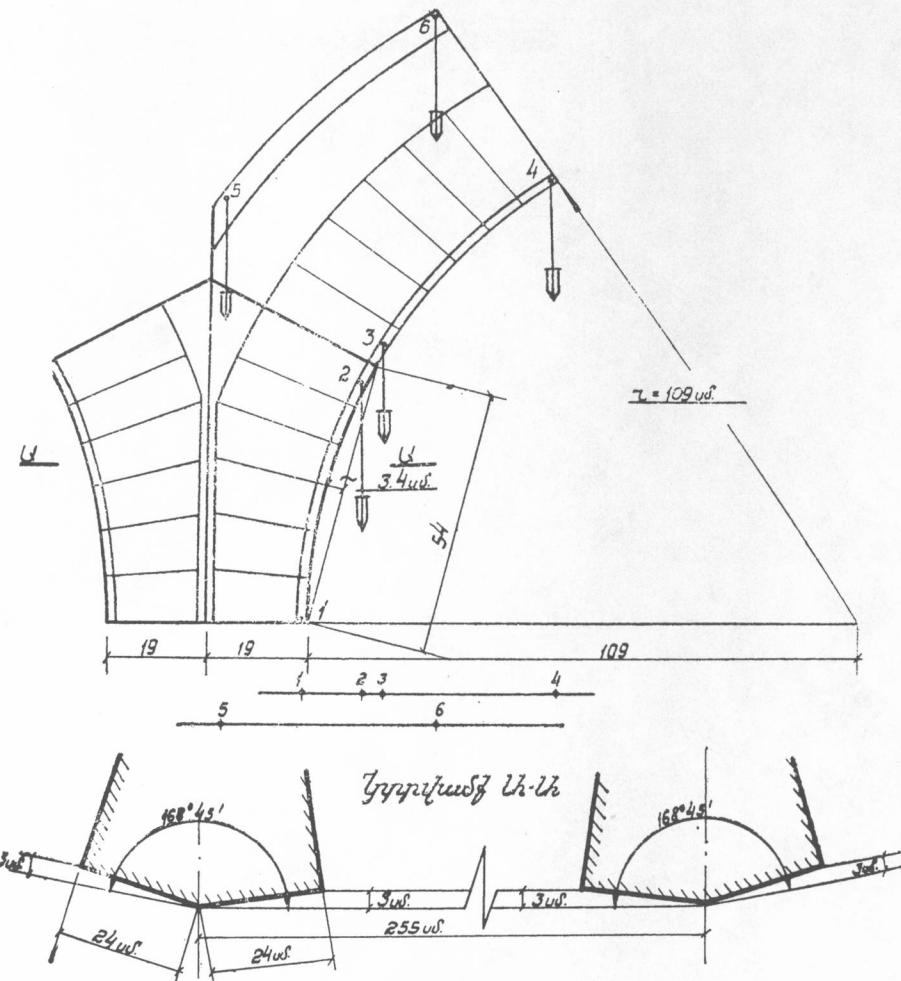
indicator of the angles of the facets, but he positioned them so that their seams become the central projection outward, effectively embrasures the windows (narrowing them toward the interior) (see fig. 28, lower). By repositioning the angle stones, Marut'yan created a much larger angle of 168.45 degrees. With the hypothetical window facet both wider and at a larger angle than in Mnac'akanyan's reconstruction, Marut'yan set up his thesis of a round second tier.

The difficulty of applying such mathematical formulae to sparse and surely damaged archaeological

remains was immediately noted by Mnac'akanyan. How, he questioned, could such a huge element of the building be calculated by such a small set of data derived from "one lonely stone"? One cannot help but be struck by the contrast between the fragment as photographed in Marut'yan's publication and its appearance in his diagram. The spoon-shaped motifs of the angle stone, unevenly sized and bearing surface corrosion, are transformed in print into six pairs of repeating rectangles. The top of the stone, clearly chipped and weathered, appears in Marut'yan's diagram as the point

FIG. 28.

Diagram of an angle
stone of the second tier by
Marut'yan (T. Marut'yan,
*Zvart'noc' ev zvart'noc'atip
tačarner* [Erevan, 1963], 46,
fig. 10)



of a triangle. The disparity between the fragment and its translation into data for a geometric analysis does not inspire confidence, particularly when Marut'yan provided measurements down to the millimeter. A seemingly insignificant deviation from Marut'yan's measurements holds monumental consequences. For example, if one measured for (u) 3.5 centimeters instead of Marut'yan's 3.4 centimeters, then a facet width of 245 centimeters results: that is, a measure conforming to Mnac'akanyan's reconstruction, as opposed to Marut'yan's. A more scientific approach would have required a large number of measurements of (u) and then a statistical analysis of the data. Even then it is unlikely that the measurements could have differentiated between Marut'yan's and Mnac'akanyan's numbers given the condition of the stones.

Equally curious is the relationship between the measurements of Marut'yan and those of T'oramanyan. In the second chapter of his monograph, Marut'yan calculated measurements for T'oramanyan's elevation of Zuart'noc'. In the subsequent chapters, Marut'yan's study of the archaeological fragments frequently arrives at precisely the same numbers. For example, Marut'yan measured a facet of T'oramanyan's second tier at 255 centimeters; and from his own measure of the archaeological fragments, he obtained 256 centimeters. The same is true of his discussion of what he believed were fragments of the second tier cornice. Again applying geometrical equations to these fragments, Marut'yan found the total diameter of the cornice to be 27.22 meters—precisely the number he derived from analyzing T'oramanyan's plan. "It is then indisputable,"



FIG. 29.
Fragments
arranged in an
arch among ruins
east of the church
platform (photo:
author)

he concluded, “that the measured fragments preserve the second story cornice of the church, as according to T’oramanyan’s reconstruction.”¹⁰⁷ It is difficult not to be skeptical of such a perfect correlation, which would have been possible to achieve through back-calculation.

While Marut’yan was strident in his vision of Zuart’noc’, Mnac’akanyan was more tentative. He was quite aware of the problems hindering a conclusive reconstruction: the few archaeological remains, the use of damaging explosives, and the centuries of weathering. He acknowledged that even with the most careful measurements and calculations there would still be questions: “We have not one single stone to confirm the conches of the tetracorch. Indeed, it is very difficult to distinguish in the fragments of the church as many as a few smooth, rectangular stones.”¹⁰⁸ If it was difficult in the 1960s to make precise measurements of the stones in question, it is virtually impossible today.

Here a few words on the current disposition of fragments, and particularly the condition of the famous arch, are in order. These stones are no longer assembled as they were photographed in the 1960s. An

arch similar, but not identical, to that of the photographs, with two angle stones enclosing a set of voussoirs, may now be found among the expanse of stones to the east of the church (fig. 29).¹⁰⁹ Unlike the upright, unified arch published in the works of Mnac’akanyan and Marut’yan, this form rests prone, with its upper course of stones with “spoon-shaped” molding tipped at various angles. The left-hand angle stone appears in its place, while on the right side another angle stone lies several centimeters away from the unit. Around this arch are several more stones, three of them taking the form of angle stones and at least three others take the form of voussoirs. In all cases, the stones have been damaged by significant weathering, and their surfaces are now covered with lichen. The poor condition of

¹⁰⁷ Ibid., 50.

¹⁰⁸ Mnac’akanyan, *Zvart’noc’ ev nuynatip hušarjanner* (n. 5 above), 101.

¹⁰⁹ Close comparison of the stones on site with those in the published photograph of Marut’yan and Mnac’akanyan allow one, in some cases, to identify the very material considered by the two scholars. In the newly arranged second story facet, the left-hand angle stone has been removed from the arch and lies on the ground elsewhere. What appeared as the right-hand angle stone has been placed at the left. The inner voussoirs making up the window arch appear to be replacements. The current measure of the arch, imagining a right-hand angle stone, is approximately two meters, as opposed to the measures of the original (2.45 m by Mnac’akanyan and 2.56 m by Marut’yan).

these stones and their decoration naturally cause one to obtain multiple measurements. My own measure of the profile angle of the angle stone was 150 degrees, not 156. The difference is significant when applied to the mathematical calculations above.¹¹⁰ While the stones in question may well belong to an upper tier of the church, their compromised condition renders them resistant to the kind of mathematical analysis undertaken in the mid-twentieth century, as Mnac'akanyan recognized even at that time.

Mnac'akanyan's Second Variant

Despite the great fame of the tetraconchal version of Zuart'noc', and its immediate and exclusive association with Mnac'akanyan, it was not his only design. In his 1971 monograph, he viewed it as the "first variant" (*arajin tarberak*) of two possible solutions:

Thus the first variant for the reconstruction of Zuart'noc' concludes. We say "first," because it cannot be excluded that the second tier was round in structure, with general outlines somewhat like the first tier. The stones of the arches of the second story, discovered in the ruins of the church, might also find their place in a variant, and offer the basis for a similar reconstruction.¹¹¹

The sketch of the "second variant" is rarely published (fig. 30). It is equal in detail to the first, and exhibits first and third tiers identical to his more celebrated reconstruction. The second tier, however, presents a fascinating compromise between a tetraconch and rotunda. As one can see from the plan (fig. 31), the interior tetraconchal shape has been preserved, but the conches are inscribed in an exterior rotunda, as in T'oramanyan's proposal. In Mnac'akanyan's reconstruction, however, the perimeter wall is broken by four pairs of niches that echo the W-shape of the piers and mark the interior joints between the conches of the exedrae.

¹¹⁰ However, the left-hand angle stone of the present arch measures approximately the same in its length and width (about 54 by 35 cm) as in the publications of Mnac'akanyan and Marut'yan.

¹¹¹ Mnac'akanyan, *Zvart'noc' ev nuynatip hušarjanner*, 103.

The niches were a clever addition. They are common features in seventh-century Caucasian architecture; for example, on the exterior of the Church of Hrip'simē (ca. 617) they serve to indicate the position of the interior conches in a manner analogous to Mnac'akanyan's proposal.¹¹² The church of Mastara (ca. 640–50) also resembles his design: niches appear on the upper level, dividing the eight facets of the drum.¹¹³ Inserting them into the second tier of Zuart'noc' served several functions at once. By dispensing with the masonry behind the piers at the second floor, Mnac'akanyan was able to adopt an essentially circular tier while retaining the limited fenestration of his tetraconchal reconstruction. The niches simultaneously eliminated the awkward spaces behind the piers on the second level. They were, moreover, not simply an imaginative solution; Mnac'akanyan claimed to have found archaeological evidence for at least one of them: "It is reasonable to ask if evidence for the new variant was found in the ruins. Yes, it seems, it was. In the ruins of the church were discovered the stones of a squinch . . . which correspond to the second-story niches."¹¹⁴ The archaeological evidence Mnac'akanyan presents is a set of four stones that describe the lower fragments of an arch.¹¹⁵ But these are the same stones that he adduces elsewhere as evidence for the domical squinch. Indeed, both the Russian and Armenian captions of the relevant plate express this indecision: the photographed stones are explained as either the squinches of the dome or a fragment of the exterior niches.¹¹⁶

At the very close of his chapter, Mnac'akanyan tendered his preference (*naxəntrut'yun*) for the tetraconchal first variant. He justified his decision not on the basis of greater material evidence or structural stability, but by what he perceived as its closer filiation with existing seventh-century buildings.¹¹⁷ At

¹¹² See Donabédian, *L'âge d'or* (n. 4 above), 84, fig. 148.

¹¹³ Ibid., 154–55, fig. 283.

¹¹⁴ Mnac'akanyan, *Zvart'noc' ev nuynatip hušarjanner*, 104.

¹¹⁵ Ibid., pl. 32.

¹¹⁶ I thank Markus Bogisch for pointing this out to me. Ibid., 53.

¹¹⁷ Mnac'akanyan makes specific reference to the churches of Mastara, Bagaran, Voskepar, Harič, and Art'ik, in which a tetraconch (cruciform in the case of Voskepar) projects from the exterior walls (ibid., 70). One may obviously take issue with the fact that in all of these cases the tetraconch (or cruciform) constitutes the first tier of the structure. Mnac'akanyan also reconstructs the church to

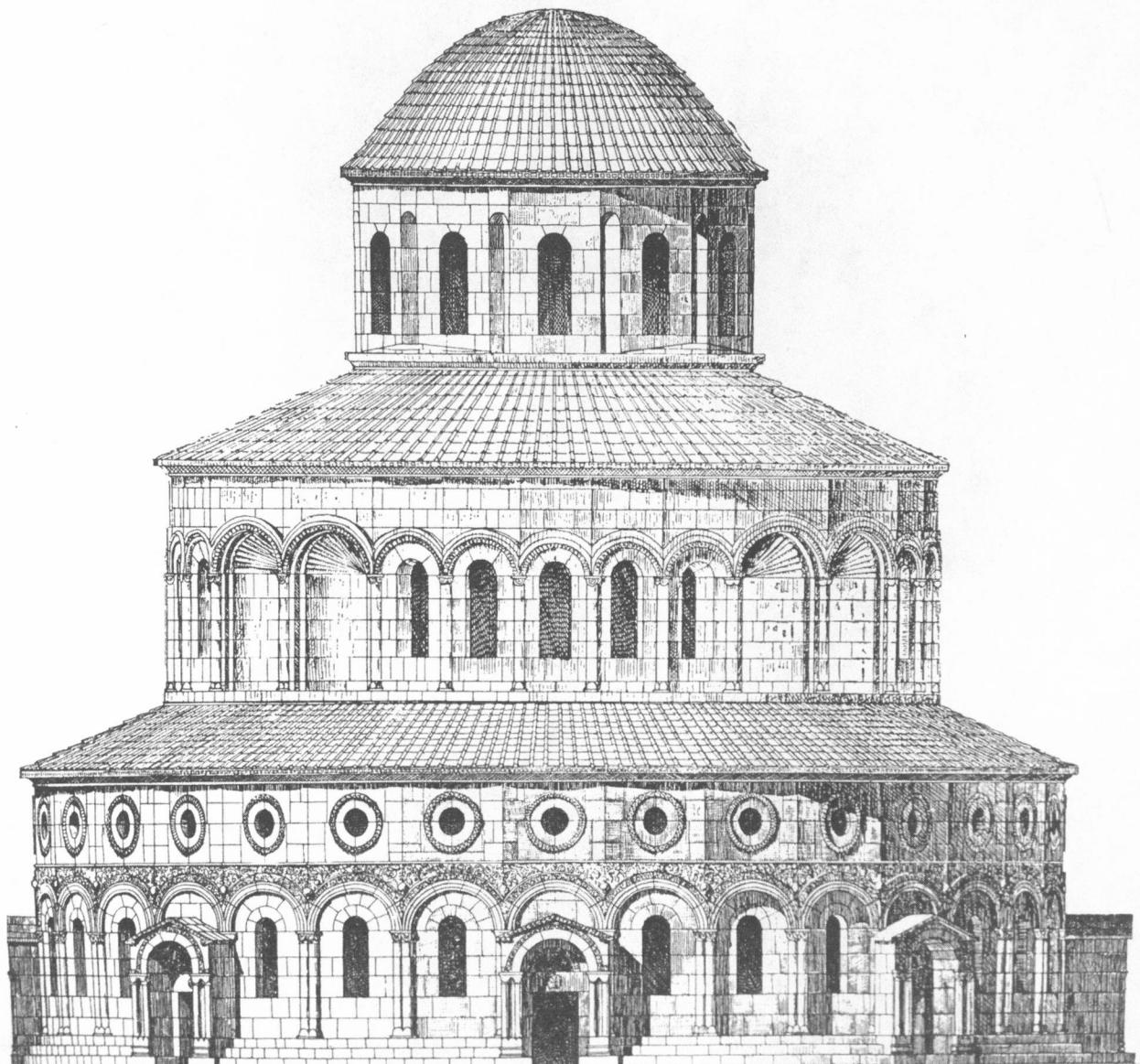


FIG. 30. Alternate Reconstruction of Zuart'noc' by Mnac'akanyan (S. Mnac'akanyan, *Zvart'noc' ev nuynatip hušarjanner* [Erevan, 1971], fig. 30)

the same time, he makes clear that he did not view his second design as simply a remote possibility. "We generated two sketches of the second story of Zuart'noc'," he writes, "and it must be said that either is possible."¹¹⁸

the south of the temple/tomb of Gaini with a cruciform expressed on the exterior of the second tier. (See *ibid.*, 108.)

¹¹⁸ *Ibid.*, 104.

This tentative attitude is not conveyed in the subsequent secondary literature. Scholars make little mention of this alternate version, leaving the reader, particularly of Western-language texts, to assume that Mnac'akanyan generated only one design.¹¹⁹ But as we

¹¹⁹ After its publication, the tetraconchal version became the favored reconstruction among many major scholars,

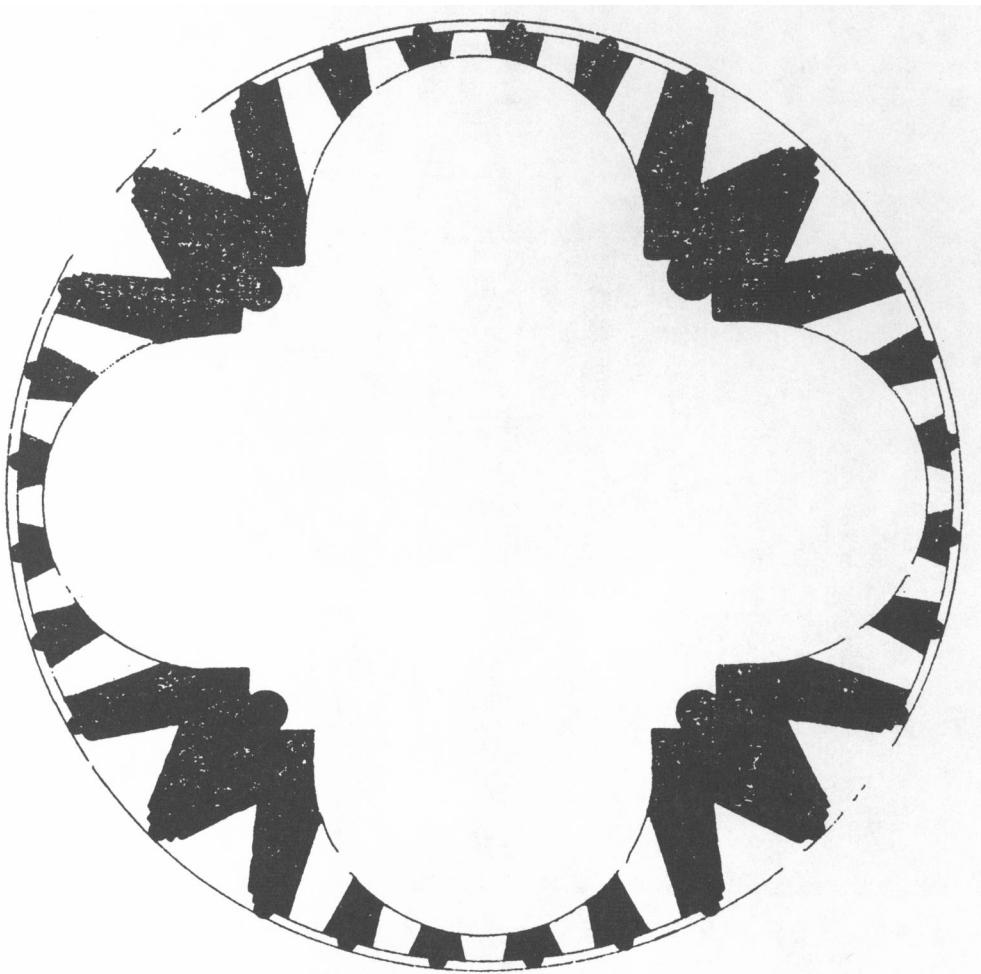


FIG. 31. Plan of the second tier in an alternate reconstruction by Mnac'akanyan (S. Mnac'akanyan, *Zvart'noc' ev nuynatip hušarjanner* [Erevan, 1971], fig. 29)

have seen, a close reading of the literature suggests a more complex and ambiguous state of affairs.

Skepticism Mounts

While divergent in many of their positions on Zuart'-noc', T'oramanyan, Marut'yan, and Mnac'akanyan all agreed on at least two points: the general arrangement of the first tier of the church, with its arcades and oculi, and the three-tiered elevation of the church. In a brief presentation in 1978, however, W. Eugene

Kleinbauer challenged both assumptions.¹²⁰ He was particularly dubious of the thirty-two oculi common to almost all of the proposed designs. While he accepted Mnac'akanyan's reconstruction of a single facet of the first tier, with its blind arch and oculus, he doubted that this arrangement recurred continuously around the entire façade. He noted that only eight circular window moldings had been found, and observed that no other Armenian building had such ample fenestration. He thus proposed that oculi "might have been grouped in another part of the structure, namely in the second story of the monument, and were far fewer in number than T'oramanyan and others would have us

including Sirarpie Der Nersessian, Jean-Michel Thierry, and Patrick Donabédian.

120 Kleinbauer, "Tradition and Innovation" (n. 2 above), 13–24.

suppose."¹²¹ Kleinbauer also raised doubts regarding the use of the model of Gagkašen as evidence for the fenestration of Zuart'noc'. This object, with its continuous arcades surmounted by oculi, was surely one of T'oramanyan's visual sources for his reconstruction of Zuart'noc'. Yet Kleinbauer noted that Zuart'noc' may not have been standing at the time of the construction of Gagkašen, and thus neither the church nor its model need have resembled Zuart'noc' in elevation. He also introduced the larger hermeneutic problem of architectural similitude, first raised by Richard Krautheimer, and reminded scholars that a medieval model was not necessarily a "faithful copy in all its salient aspects of the building of which it purports to be a copy".¹²²

Based on Kleinbauer's report, it would seem that even the reconstruction of the first tier of Zuart'noc' is debatable. The lack of archaeological evidence and contemporary parallels for such a row of oculi certainly encourages caution in reading the previous reconstructions. But these issues do not in turn support the position of fewer oculi. A visit to the site emphasizes the difficulty of discerning the original number of oculi. One may identify a series of square fragments on which a curved decoration is carved. These are the forms that T'oramanyan identified and reconstructed as oculi. Today the layout of the archaeological material at the site includes a row of oculi, including one example composed of five separate fragments and an adjacent example consisting of eight fragments of two types of decoration. In addition, over twenty similar fragments lie scattered around the grounds, representing six types of decoration. It would be very difficult to obtain a specific count of oculi given the present condition of the remains. What is certain, however, is that this number is no greater than that of the surviving exterior arcades. A visit to the present site reveals the arrangement of five and one-half arcades. Yet Kleinbauer assumes these occurred continuously around the perimeter of the wall. The lack of material evidence must be treated with care; given what we have learned about the excavation history of Zuart'noc', it seems impossible to use quantitative analysis of the fragments to determine the reliability of a particular reconstruction.

¹²¹ Ibid., 17. The author tentatively suggests that the oculi were grouped around the portals, as at Bosra in Syria.

¹²² Ibid.

However, two of Kleinbauer's other points carry force. First, one must take account of the problematic, and perhaps artificial, visual resemblance between the church of Zuart'noc', the Church of Gagik at Ani, and the stone model of the latter. T'oramanyan was involved with all of these projects and, whether consciously or not, a certain amount of visual cross-pollination may have been at work. Second, there is the problem of the copy. Certainly medieval copies, whether in monumental or miniature form, were not, as Kleinbauer put it, "xerox copies." Krautheimer's celebrated study of medieval copies of the Anastasis Rotunda demonstrates powerfully that the premodern notion of an architectural copy allowed for great variation in plan, elevation, supports, and superstructure.¹²³

Notwithstanding Kleinbauer's prudent caution against historical projection, one must take care to test, rather than to assume, its applicability across medieval cultures. The Caucasus had its own distinctive and rich tradition of stone architectural models, which offers an alternate perspective on the question of similitude. The tenth-century donor models of the churches of Alt'amar, Hałbat, and Oški show careful observation of their sources: in each case, the model reproduces in miniature the position of exterior niches, windows, and portals. In the case of the Oški model, the object also replicates the alternating windows in the blind arcade of the drum (fig. 32). Thirteenth-century donor models show even more detailed imitation, sometimes including tiny versions of donors holding models, as depicted on the church façade. In light of this evidence, a close visual relationship between the Church of Gagik and its model would conform to local visual traditions, if not to those of other regions.

Oški, approximately 125 kilometers north of Ani in Tao-Klarjeti, holds an additional piece of evidence regarding Zuart'noc' and its first tier: a wall painting depicting the church of Bana. Constructed from the late ninth to the early tenth century, Bana was most likely constructed while Zuart'noc' was still standing, and has long been recognized by scholars for its close typological, structural, and sculptural affinity with that monument. Like Zuart'noc', Bana features an exterior arcade with grapevines in the spandrels. Whether or not oculi were included in its first tier is

¹²³ R. Krautheimer, "Introduction to an 'Iconography' of Mediaeval Architecture," *JWarb* 5 (1942): 1–33.



FIG. 32. Model of the church of Oški in Tao-Klarjeti (photo: author)

now impossible to determine. However, a painted representation of Bana on the interior of the west wall of Oški may be of some assistance. The painting, like the church itself, survives only in its lower elevation, thus conforming strikingly (and sadly) to the preservation state of all the Caucasian aisled tetraconchs and their representations (fig. 33). Yet enough remains to reveal the first level of a round church with one central and two lateral portals. From the stylobate rises a parapet-like lower wall, from which spring blind arcades framing arched windows. Above the arcades are five larger windows, preserved only in their lower portions. Clearly this scheme is not identical to the first tier of Zuart'noc' as it is typically reconstructed, nor to the model at Ani. Yet the image does show that two rows of windows occupied the same wall surface. Note also

that while great care is taken to delineate the projections of the roofs over the doors, the lower and upper window zones appear on an undifferentiated plane. This evidence, when interpreted within the context of local modes of architectural representation, serves to temper the generalized skepticism expressed toward medieval replicas.

A larger argument raised by Kleinbauer questions the existence of three tiers at Zuart'noc'. Kleinbauer instead proposed a two-tiered structure. Although he does not offer details or a reconstruction drawing, Kleinbauer describes the building as

a tall cylindrical drum set back from the lower perimeter wall by pent roofs covering the raking barrel vaults over the ambulatory and rimmed with at least a few windows . . . erected on a circular space defined by the four main piers at the corners of the central space covered by a conical roof.¹²⁴

Kleinbauer visualizes the drum rising from the four domical piers and resting on a roof that slants over the ambulatory. He also suggests that the corners of the central square bay may have protruded on the exterior, as at the churches of Hrip'simē and Gayanē. Thus, in Kleinbauer's view, Zuart'noc' was lower, with a simpler exterior and fewer windows. Such a building would seem to hold structural advantages over the three-tiered versions of Zuart'noc' previously proposed because of its shorter profile, greater expanses of wall, and fewer architectural seams. But Kleinbauer's reconstruction does not adequately account for the complexity of the ground plan or, most importantly, for the single eagle columns between the conches. This feature sets Zuart'noc' apart from all other aisled tetraconchs in Syria and Mesopotamia, a point highlighted by both T'oramanyan and Mnac'akanyan that deserves greater attention. The fusion of these columns with the tetraconchal plan and their position in relation to the domical piers and the exedrae require explanation. Kleinbauer's scheme is more realistic in its structural stability; yet the creation of some kind of intermediate circular superstructure, of however modest profile, would seem to make more expedient use of the components of the ground plan.

124 Kleinbauer, "Tradition and Innovation," 19.



FIG. 33. Fresco of the church of Bana, on west wall of Oški in Tao-Klarjeti (photo: author)

Critical to Kleinbauer's proposal is the absence of contemporary parallels for a three-tiered scheme. This point obliges one to scrutinize prior justifications for a three-tier design and not "to allow ourselves to be mesmerized" by T'oramanyan's reconstructions.¹²⁵ It is important to note, however, that three-tiered structures did indeed exist in the Caucasus. Such an elevation can be seen in an early fourteenth-century monument at Elvard, in which a barrel-vaulted semi-hypogaeum supports a gabled mid-level, crowned with an open columnar canopy and conical roof. The "Shepherd's Chapel" at Ani, generally dated between the eleventh and thirteenth centuries, also presents a three-level format: the first level, resting on a round stylobate, is a hexagon enclosed in a complex faceted

exterior; the second-tier exterior features six sides, each framed by a niche; and the third is a cylindrical drum from which rose a conical roof. Both of these structures are admittedly much later than Zuart'noc'. They are also smaller: the "Shepherd's Chapel" is almost a seventh the width of Zuart'noc'. Its small size and the massive thickness of the first-story walls surely account for the partial survival of the elevation until its collapse in 1966.

Yet Kleinbauer's hypothesis raises more fundamental questions regarding both the evidence and the way it is described. Of contemporary churches in Armenia, such as Hrip'simē and the large church of T'alın, he writes that "all share one salient characteristic: their elevations are two-storeyed, sometimes to be sure with a richly articulated exterior composition, sometimes only with simple lines. Not a single example

125 Ibid.

preserves a triple-storeyed exterior.”¹²⁶ The language used in the above passage invites scrutiny. First, by “storey” the author is referring *not* to a distinct floor within the interior, but rather an external level of the building. Yet even so, the distinction drawn between an external “storey” and the “rich articulation” of the exterior seems to require further definition. Considering the corpus of contemporary Caucasian monuments, one is struck indeed by the complexity of the exterior profiles, which are not easily described in terms of number of levels. The church of Ōjun, with its covered porticoes, lower side-aisle roofs, gabled crossarms, square bay corners, and drum, presents a particularly problematic monument. If the square bay rises high from the crossarms, does it constitute a separate external level? If so, then one must account for the churches of Tekor, Lmbat, and Dorbantivank’ in Armenia, and the churches of Djvari and Ateni in Georgia, among others. Looking at the large church of T’alin, from the east, north, or south one sees a clear progression of three levels: above a protruding exterior conch rises a gabled roof, from which rises the drum. The now-destroyed church of Bagaran, a square plan with four projecting conches, exhibited a similar exterior rhythm.¹²⁷ It may be that, like the churches above, Zuart’noc’ exhibited a complex exterior profile that included a short, intermediate, vertical rise.

One hopes these observations are not construed as pettiness; in my view, they reveal how architectural terminology has shaped, and even constrained, discussions of Zuart’noc’. Both architectural description and hypothetical reconstruction, although two very different representational modes, operate within established conventions that may or may not harmonize with the material evidence. For a form such as Zuart’noc’, and indeed for the Caucasian architectural tradition as a whole, the term “story,” I propose, is insufficiently nuanced.

Common Criteria for the Reconstruction Theories of Zuart’noc’

While reconstruction designs of Zuart’noc’ exhibit wide variation, all the arguments involve three fundamental components: the archaeological evidence, comparative monuments, and expectations of structural

stability. Each scholar has used these criteria to compose and evaluate reconstruction designs. While these criteria seem self-evident, the survey of literature above suggests that they require careful definition.

The use of archaeological evidence at Zuart’noc’ is perhaps the most obviously flawed of the three. Reports of the initial excavations show that the ruins were compromised. T’oramanyan lamented the lack of a firm material foundation upon which the original appearance of the church could be envisioned; his multiple designs reflect a tentative attitude toward the reconstruction of the monument. Moreover, Marut’yan and Mnac’akanyan used geometrical analysis of the same archaeological remains to develop divergent theories. Their debates reveal the dramatic variations possible in the interpretation of very limited material.

Second, there is the question of local architectural parallels. All scholars of Zuart’noc’ have sought to defend their arguments by means of reference to Caucasian traditions. The height-to-width ratio of the church, the presence of ladders, the height of the eagle columns, and the slope of rooflines are all judged in this way. Thus the texts of T’oramanyan, Mnac’akanyan, and Marut’yan repeatedly refer to the canonicity (*kanonut’yun*) of a feature (or dismiss it as *ankanonakan*).¹²⁸ Kleinbauer also uses this principle to challenge the reconstructions of Zuart’noc’. Yet one must surely take care in applying such a measure to a monument conspicuous in its use of architectural, sculptural, and epigraphic elements drawn from multiple traditions, and which was commissioned by a patron closely connected to the Greek-speaking, imperial sphere.

Structural stability, like archaeological evidence, would also seem an obvious criterion. But issues were immediately raised in criticism of T’oramanyan’s reconstructions. Mnac’akanyan sought in his versions of Zuart’noc’ to increase the stability of the monument, lowering its height and lightening the load of the superstructure. Kleinbauer proposed an even lower and more simplified structure. Zuart’noc’, it seems, is getting shorter with age. Such attention to the structural integrity of the monument is of course necessary in evaluating and proposing reconstructions. Yet it must also be historicized. What was understood as stable in

¹²⁶ Ibid., 18.

¹²⁷ See Donabédian, *L’âge d’or* (n. 4 above), 69–70.

¹²⁸ See, for example, Mnac’akanyan, *Zuart’noc’ə ev nuynatip hušarjanner*, 108.

the seventh century? One might explore this question through an investigation of medieval repair work or the contents of vaulting infill. For example, archaeologists have recently argued that obsidian found in the masonry at Zuart'noc' was used to lighten and elasticize the superstructure.¹²⁹ Yet the question of stability must be even further refined in relation to Zuart'noc'. As much as can be surmised, the church survived for around three centuries before its collapse. If this is the case, the structure was somewhere between flimsy and perfectly stable: determining the stability sufficient for this lifespan remains an important obstacle to envisioning the elevation.

To these three criteria one must add, finally, the concept of architectural function. Debates on the reconstruction of Zuart'noc' often hinge on this issue. Remember the critiques of T'oramanyan's functionless windows and the awkwardly shaped and inaccessible chambers of his second level. Such comments oblige us to be wary of historical projection, as they assume a total understanding of the motivations informing medieval building. They also invite us to ask to what extent the reconstruction designs of Zuart'noc' were themselves shaped by the sensibilities of modernist architectural theory, aesthetics, and practices. It bears mentioning that the monographs of Marut'yan and Mnac'akanyan were produced during the same period as the Zuart'noc' airport terminal, in which T'oramanyan's three-tiered scheme was translated into the language of Soviet industrial architecture.

Broader Implications

The hypothetical reconstructions of Zuart'noc' were shaped, either explicitly or implicitly, by broader beliefs about the origins of Armenian architecture and its relations to other traditions. Because these reconstructions form part of a larger and sometimes heated conversation about creative primacy, some remarks are in order about their broader implications. In the interest of space, I will focus on the reconstructions of T'oramanyan and the tetraconchal reconstruction

¹²⁹ V. Israelyan and V. Jugurian, "On the Employment of Expansive Obsidian in the Construction of the Church of Zuart'noc'," in *The Second International Symposium on Armenian Art*, vol. 2 (Erevan, 1981), 75–81 (in Russian).

of Mnac'akanyan, as these are most frequently represented and republished.

Toramanyan's beautiful representations of Zuart'noc' present a symmetrical and regular monument of repeating cylinders and cones. It is a form easily committed to memory and often likened to a wedding cake, but not one that finds obvious parallels in surviving medieval architecture. This uniqueness is also reflected in T'oramanyan's writings: while he viewed Zuart'noc' as a "mingling of Roman, Byzantine, and Armenian styles" of architecture, he stressed repeatedly that these elements were combined in a singular and unprecedented way, attesting to the boldness of the architect and to the genius of the patron Nersēs III.¹³⁰ In opposition to Charles Diehl, who wrote in 1910 that "il est tout à fait vraisemblable [that Nersēs] employa pour bâtir son monument des artistes grecs," T'oramanyan asserted that the "entirely unfamiliar and uncanonical construction" of Zuart'noc' "cannot be regarded as foreign."¹³¹

Diehl himself was responding to Josef Strzygowski's broader claims about the generative power of Armenia. Strzygowski had worked together with T'oramanyan on *Die Baukunst*. As we have discussed above and elsewhere, this work asserted Armenia's originative power over the medieval building traditions of the eastern Mediterranean and Europe.¹³² Zuart'noc' formed a key monument, a "landmark" (*Markstein*) in Strzygowski's words, within this argument.¹³³ Indeed, in *Die Baukunst*, Strzygowski expressed regret for his previous error in seeking Byzantine models for Zuart'noc', saying that had he known earlier what he then knew, such a thought would have been far from his mind.¹³⁴ As was typical of Strzygowski's method, however, his analysis focused on the ground plan of Zuart'noc' rather than on its elevation, however much he seemed tacitly to accept T'oramanyan's reconstruction. Only the proposed galleries, as mentioned earlier, earned special note from

¹³⁰ T'oramanyan, *Zuart'noc'-Gagkašen* (n. 31 above), 31.

¹³¹ C. Diehl, *Manuel de l'art byzantin* (Paris, 1910), 318; T'oramanyan, *Zuart'noc'-Gagkašen*, 39–40.

¹³² Maranci, *Medieval Armenian Architecture* (n. 40 above), 85–175.

¹³³ Strzygowski, *Die Baukunst* (n. 51 above), 110.

¹³⁴ Ibid., 109.

Strzygowski, who insisted that they “absolutely [do] not reflect Byzantine influence.”¹³⁵

For Marut’yan, as we have seen, the defense of T’oramanyan’s reconstruction theories fueled a sustained analytic study. In the same work, Marut’yan stressed the unique character and generative power of Zuart’noc’. Following his architectural discussion, Marut’yan includes a short chapter comparing Zuart’noc’ to another aisled tetaconch: the sixth-century church of Bosra in southern Syria. Marut’yan bristled at the remark of Kuznetsov (whose own reconstruction drawing we considered previously), who said that Zuart’noc’ was a “second Bosra.”¹³⁶ While Marut’yan believed that elements from this and other Syrian monuments were appropriated at Zuart’noc’, the value of that church was its unique character and role as a prototype (*naxorinak*) for subsequent monuments in the Caucasus.¹³⁷

By contrast, Mnac’akanyan’s tetraconchal reconstruction, with its projecting conches at the second tier, invited closer comparisons with aisled tetraconchs known from Syria, Mesopotamia, and Italy. The author devoted a chapter to the relationships between Zuart’noc’ and other monuments, including Bosra, Seleucia-Pieria near Antioch, and San Lorenzo in Rome.¹³⁸ Mnac’akanyan also found both appropriated and original elements in Zuart’noc’. In the conclusion to his chapter, however, Mnac’akanyan highlighted the circular support system of the ambulatory as a unique and ingenious local invention, as did T’oramanyan before him. That is, despite the divergent visual appearance of the cylindrical and tetraconchal reconstructions, their creators were in agreement upon what distinguished Zuart’noc’ from its comparanda.

Much is at stake in determining the origins of Zuart’noc’. The site is large and impressive, the church is celebrated in medieval Armenian sources, and it is understood to inform other medieval monuments in the Caucasus. The site is also intimately connected to modern Armenian culture through the person of T’oramanyan. Marut’yan’s impassioned defense

of the cylindrical second tier of Zuart’noc’, one may argue, seeks to honor the virtuosity of both the medieval and the modern Armenian architect. This was and is a broader sentiment: a visitor to Zuart’noc’ encounters, to the west of the church ruins, a large bust of T’oramanyan, which makes a visual connection between the man and the church. In this way, Zuart’noc’ forms a touchstone of the Armenian architectural tradition. Understanding it fully requires knowledge of and sensitivity to both its contemporary context and its modern reception.

In this regard, it is instructive to consider the many ways that the reconstruction drawings have reappeared in secondary literature since their initial publication. Kleinbauer’s essay “Zvart’not and the Origins of Christian Architecture in Armenia,” published in 1971 (and thus prior to his own thoughts on the reconstruction), looked for the origins of Zuart’noc’ in the aisled tetraconchs of Syria and Mesopotamia.¹³⁹ The essay was illustrated with Mnac’akanyan’s tetraconchal second-tier reconstruction in an exterior view and a section. In a more recent study, I explored the appropriation of imperial visual ideas at Zuart’noc’, and considered these appropriations in relation to Hagia Sophia in Constantinople.¹⁴⁰ My essay also used, by means of illustration, the tetraconchal reconstruction of Mnac’akanyan. In neither my essay nor that of Kleinbauer was any substantive discussion devoted to the reconstruction or its problems. In both cases, however, the selections served the purposes of the author: the argument for grouping Zuart’noc’ with Syro-Mesopotamian tetraconchs is only made stronger with the image of an exterior tetraconchal form at Zuart’noc’, just as my argument for connections with Hagia Sophia was only strengthened by the visualization of Zuart’noc’ with projecting conches.

A similar point may be made with regard to the use of T’oramanyan’s reconstructions. In 1989, a publication focusing on the relationships between Zuart’noc’ and the Anastasis Rotunda in Jerusalem offered detailed comparisons of the plans and of the capital sculpture of

¹³⁵ Ibid., 686.

¹³⁶ Marut’yan, *Zvart’noc’ ev zvart’noc’atip tačarner* (n. 1 above), 84, responding to A. Kuznetsov, *Tektonika i konstruktsija tsentricheskikh zdaniij* (Moscow, 1951) 75–6.

¹³⁷ Ibid., 86.

¹³⁸ Mnac’akanyan, *Zvart’noc’ev nuynatip hušarjanner*, 147–61.

¹³⁹ Kleinbauer, “Zvart’not” (n. 3 above), 256–62.

¹⁴⁰ C. Maranci, “Byzantium through Armenian Eyes: Cultural Appropriation and the Case of Zuart’noc’,” *Gesta* 40 (2001): 105–24.

both monuments.¹⁴¹ The essay reproduced the reconstructions of T'oramanyan in both external and cutaway views, but this choice of illustration received limited authorial commentary, leaving the reader to infer correspondences not only in the measurements and sculptural forms of the two monuments, but also, presumably, in their cylindrical elevations. In all these cases, the reconstruction selected for republication was largely tangential to, and yet harmonious with, a broader argument about origins. In other words, the drawings now function as rhetorical buttresses rather than either direct evidence or explicit argument: a problematic state of affairs that surely has parallels in the study of other now-lost monuments.

This essay has explored the limits of the material evidence for the elevation of Zuart'noc', and has sought to challenge the ways that we read and use the hypothetical drawings of the monument. Careful scrutiny of the literature demonstrates that their original function

¹⁴¹ D. Piguet-Panayotova, "Récherches sur les tetaconques à déambulatoire et leur décor en Transcaucasie au VII^e siècle," *OC* 73 (1989): 166–212.

as arguments has eroded over time, blurring the lines between theory and material evidence. The striking ground plan of Zuart'noc', its preserved lower elevation, sculptural program, epigraphic corpus, and the testimony of contemporary chronicles, provides firmer ground than the "lonely stones" of the upper elevation. Yet even if a definitive reconstruction lies beyond our grasp, there is much to discover in the excavation history of Zuart'noc', the impassioned debates about its original appearance, and the ways in which the reconstruction drawings have been subsequently appropriated. Zuart'noc', in all of its versions, remains a potent fusion of forms and traditions, inviting reflection on the medieval, the modern, and the ways in which the two are entwined.

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